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The Journal of the Telephone Industry

DECEMBER 8, 1945

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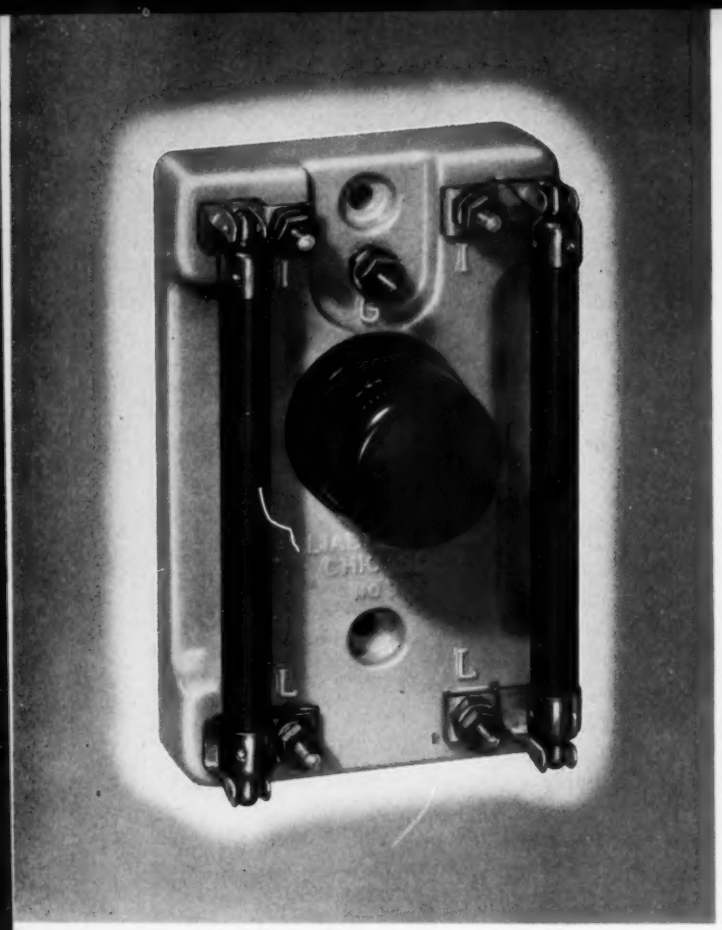

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Editorial

TAKING STOCK

EVERY publication, now and then, likes to take stock of and review the results of any movement or "crusade" which it has sponsored for the benefit of the industry it serves. Therefore, we know our readers will pardon us if we recount and inventory the results of TELEPHONY'S editorial campaign to encourage the telephone industry as a whole to take definite action to assist small Independent telephone companies to improve their operations and to restore their business on a profitable basis.

It has been almost two years now that this publication began its fight in behalf of the small companies. The "campaign" was started with an address by the editor at the January, 1944, convention of the Minnesota Telephone Association. He warned all segments of the industry that if the smaller companies did not receive more aid and guidance from associations, large companies, trade journals and regulatory bodies in their effort to bolster their inadequate revenues, many of them would go out of business, which would have an over-all weakening effect on the entire industry as a private enterprise and might invite a threat of government intervention in our industry.

For almost 24 months TELEPHONY has continued to stress the need of the industry's increased support of its smaller units, realizing that progressive leaders in the business recognized the importance of such action.

In taking stock of the results accomplished by our constant emphasizing the small company problem, we find they have been favorable and beneficial to the entire industry. We believe our effort has been instrumental in bringing about the following developments:

(1) Encouraged many small companies to make applications to their state commissions for higher rates to produce sorely needed revenues. This is evidenced by the increased reports in TELEPHONY of rate increase applications by such companies.

(2) Encouraged officers and directors of both national and state associations to give greater support to their executive officers in their effort to help member and non-member small companies.

(3) Increased the interest of many small companies to improve their plants by installing modern central office equipment and by adopting up-to-date construction and maintenance methods. This is evidenced by the increased conversions of small company exchanges from magneto to common battery manual or dial. It also is indicated by the numerous inquiries by such companies concerning such equipment as power pole hole diggers, cable-burying machines (to be owned and used cooperatively), carrier and radio-telephone equipment for rural lines, buried wire, new protection, compressed or rolled sleeves for wire splices, high tensile wire for long span construction on rural lines, etc.

(4) Increased the effort of many larger companies to give more advice and help to small companies in all phases of their operations.

(5) Induced greater publicizing of the Independent telephone industry as a business of opportunities for returning veterans trained in communications and other young men, thereby strengthening and maintaining progressive management in the industry.

(6) Conditioned the industry for its successful fight against proposed federal legislation to create a Rural Telephone Authority, or to permit the REA, to enter into the financing and operation of rural telephone facilities, which was introduced just 11 months after we warned that the threat of government intervention was a possibility. Our warning was based on a statement made to us in 1943 by our Washington editor, Francis X. Welch, that, in his opinion, we might expect the introduction of such legislation in 1944. This publication has maintained vigorous opposition to the rural telephone legislation, always insisting that the industry could and would continue to adequately serve the rural areas without government intervention.

(7) Developed a better understanding of the problems and needs of small companies on the part of state regulatory bodies, resulting in the latter adopting a more sympathetic attitude when the small companies appeal to them for assistance.

These developments have been beneficial to every segment of the industry. By improving their financial status, making possible the purchase and installation of modern equipment and adoption of newer construction methods, small companies are able to give better telephone service to the public, thereby improving the performance and standing of the industry as a whole.

The Independent manufacturers and suppliers benefit because without adequate finances, small companies cannot purchase new and modern equipment, depriving the manufacturers of much volume which they need to continue full research, development and production of improved equipment for the Independent industry.

The industry's association and journals also benefit when small companies are in a strong financial and operating condition as more and more of them are able to obtain the value of association memberships and subscriptions to their trade journals.

Also the position of state commissions has been strengthened by the efforts of the industry to improve the condition of the smaller companies. As we said at the 1944 Minnesota convention, "When utilities are in a sound condition and render and maintain good service, state regulation becomes more and more justified in the minds of the public and the possibility of federal encroachment upon state commissions' rights is lessened."

That TELEPHONY'S effort in behalf of the smaller companies has struck a responsive chord within and without the industry is evidenced by the many commendatory letters we have received from large and small operating companies, manufacturers and state commissions. However, it is the communications from small company owners, thanking us for our support and telling of their activities to improve their operations, that convince us that our effort has not been in vain, and influence our decision to continue our activities in behalf of the smaller companies. Typical of such letters are two which were received recently from Richmond R. Mann, consulting engineer of Nunn, Colo., which we reproduce below:

"Have been reading a lot in TELEPHONY about the small exchange and its problems. Have been very much interested in some of these small exchanges and have tried in many cases to help put some of them on their own feet. After a lot of preaching about what should be done I suddenly found myself in a position where I had to come out and operate my own exchange as I could not get a man for the job.

"Took over the Nunn Telephone Co. in June of this year. It was in a very much run down condition and some of the phones were 30 to 35 years old. Everything was magneto and most of the lines were grounded circuits. At the time I took over the company had 62 subscribers. In the past three months the subscriber list has increased to 76 and we have a waiting list of 17.

"Have been installing common battery handsets in the

town and magneto handsets on the farm lines. The old wall type telephones we are junking. As we could not increase our rates at the time, we installed kick coils on all new town lines and charge 50 cents more per month than the magneto rates. We are not giving magneto service to any new town subscribers. All new lines must be common battery.

"In addition we have installed a pay station in the Municipal Hall. In the short time it has been in it has paid its way. We have had a number of local calls that otherwise would have been free calls and in addition we have had enough toll from it to prove its worth. Believe that most small companies make a mistake in not having a pay station in a good location.

"At the present time we are making plans to install a dial system in another town (Carr, Colo.) and also have a call to install a 10-line PABX at a large ranch in our territory. We also are planning on installing a dial system at Nunn some time within the next year or so.

"We are making a practice of limiting party lines to only four subscribers. Too many on a line makes for poor service and dissatisfied subscribers.

"We plan on making all lines metallic next spring and at the same time install about 20 miles of new pole line to take care of a number of ranchers. On lines more than three miles long we charge the subscriber the cost of all material. The amount paid is credited to the subscriber in the form of telephone service. After his credit is completely used up the line belongs to the company and thereafter the subscriber pays a regular monthly bill. We believe this to be the most logical plan as it avoids a large outlay for a line that may not be used long enough to pay for itself.

"There are those that will say we are spending more than we are taking in. That is right, we are. However, we have increased our monthly revenues 35 per cent over that of the former owner and have now reached the point where we can take it a bit easier on the improvements and make them more gradual. The initial spurt required to make improvements is generally the hardest.

"Now that winter is almost here, we are taking inventory of what must be done in the spring and are starting to accumulate material for a big expansion program next year. By that time the help situation will be better and we will be able to get an early start. In line with our expansion program, we are also planning on taking over two small mutual companies in our territory for which we now perform switching services.

"Believe that if other small companies will take the initial step in making improvements they will find the next step will be easier and within a short time they will notice a marked increase in revenue—both local and toll."

* * *

"In reply to your letter of November 20 wherein you ask permission to use all, or part of my letter of November 15 (above) in your magazine, please feel free to use my letter in any manner you see fit, either whole or in part.

"I agree with you 100 per cent when you say there is no need for the government to come into the business by making loans or setting up co-operative organizations. The small company operator will be ahead on any financial deal if he will contact a bank in his territory. Any progressive bank is always willing to make a loan to an operator who is trying to make progress and who is a stable citizen in his community (most telephone people are, incidentally). Government loans to small companies will mean government control and government control will mean the end of free enterprise.

"Keep up your fight to keep the political parasites out of the Independent telephone industry and more power to you."

>> *For days on end, the private telephone in the office of Rep. Emily Taft Douglas (D., Ill.) would jingle, and the voice on the other end of the wire invariably would say, "I have an awful toothache. When can I see you?"*

The secretarial staff of Mrs. Douglas tried to be helpful. They would recommend various dentists and then hang up, muttering something about the lives of congresswomen.

Finally, when things were carried too far, a little research was started and the facts unearthed. It seemed that a dentist, who indulged in advertising, had printed cards with his telephone number on them, with the request that owners of toothaches call him at once. A printer's error in transposing two numerals made his number identical to that of Mrs. Douglas' private number in her office.

The only consolation Mrs. Douglas' staff got was the thought that perhaps the dentist occasionally received calls from people who had some complaint or another about Congress.—**Chicago (Ill.) *Sun***

>> *Three soldiers attached to the 94th Signal Battalion in Paris were called to General Somervell's office there. They were told to check the general's bank of telephones. The GI's, who were expert at stringing wires in the field, knew practically nothing about telephone repairs, but nevertheless set to work.*

As they were leaving, one of General Somervell's aides rushed down the hall and reported to them, "The general's having trouble with his telephones."

"What's the trouble?" asked Sgt. Ferris Hartman.

"He isn't quite sure," said the aide. "When he wants to call the local Seine section, he finds it quicker to route the call long distance through Metz. Right now he wants to call the left bank. How does he do that?"

"Oh, it's quite simple," Sergeant Hartman shrugged. "Route the call through Brussels."—**Leonard Lyons, Chicago *Daily News***

>> *Water buffaloes have given U. S. Signalmen some telephone trouble on the island of Leyte by getting entangled in the carefully laid wires.*

>> **He talks like a watch which ticks away minutes, but never strikes the hour.—*Samuel Johnson***

Joint Use in Rural Areas

By H. J. SCHOLZ, Supervisory Engineer
Commonwealth & Southern Corp.
and
F. M. CRAFT, Chief Engineer
Southern Bell Telephone & Telegraph Co.

PRIOR to the war, the power and telephone companies had extensive programs under way for extending service into rural areas. This work was curtailed temporarily during the war due to the necessity of using critical materials and manpower in the war effort. With the end of the war and the availability of material, the power and telephone utilities are rapidly resuming the extension of their lines to serve many more rural homes. Although many new economies in construction will be employed, this expansion program will entail expenditures of large sums by both the telephone and power companies.

The telephone and power companies have been searching intensively for means whereby their services may be provided within the economic reach of more rural families. One important requirement to the attainment of this goal is the development of less costly methods of communication and power line construction without excessive maintenance expense so that the pole lines may be extended still further into the more sparsely settled areas.

Since the Commonwealth & Southern Corp. in the South and the Southern Bell Telephone & Telegraph Co. operate in the same rural territories, characterized by large areas and relatively low customer density, it was natural for them to collaborate in surveying these areas and to devise ways and means by which they could extend service to more people living in such areas.

Joint pole line construction is not new to these companies, as it has been employed extensively in the urban distribution plant for many years. Heretofore, for several reasons, it generally has not been considered practical to construct jointly used rural lines. Recent developments, however, in both the power and communication fields, have reached the point where it may be practicable and economical to construct jointly used pole lines for rural service. Some of the developments which now tend to make this type of construction feasible are mentioned in the following.

In order to obtain field experience in the construction and maintenance problems which these developments present and to permit tests to determine the feasibility of this type of construction, a trial installation of rural joint use was made in July, 1945, through coordinated efforts of the Commonwealth & Southern Corp. and the Southern Bell Telephone & Telegraph Co.

For the purpose of this installation, an existing rural power line of the Alabama Power Co. in the vicinity of Selma, Ala., serving the communities of Radford and Suttle, Ala., was utilized. The section of line selected is approximately 16 miles in length and carries a single phase 7.2 kv multigrounded neutral power circuit.

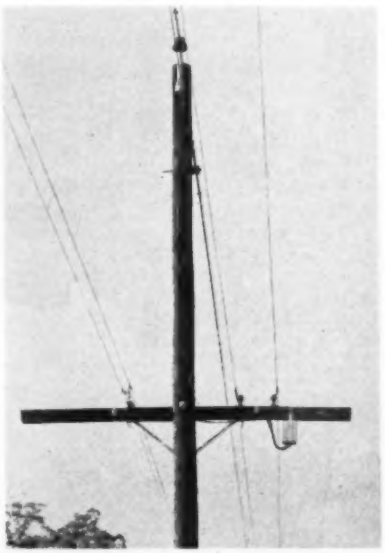


Fig. 1. A section of a typical power pole after telephone circuits were added, showing telephone transposition and protectors and drainage unit mounted on crossarm.

The line consisted generally of 35-ft., class 7 poles, with 197 poles in the route. It was necessary to replace 21 poles to secure additional ground and roadway clearance. The line is situated in the light loading area with an average spacing of 435 ft., and the class 7 poles were of sufficient strength to support the two No. 4 ACSR power wires and at least eight 109 high strength steel telephone wires to conform to National Electrical Safety Code grade "C" construction. Guying was added at corner poles where required to support the load imposed on the pole structure by the addition of the telephone wires. *Fig. 1* shows typical pole head configuration.

A development study of expected telephone users was made in the area served by the existing power line, and it was determined that the expected ultimate need would require stringing four circuits for a distance of three miles, two circuits an additional distance of 7.5 miles and one circuit for a further additional distance of 5.5 miles to the end of the route. For the purpose of the trial installation, only three circuits were placed for the first mile and two circuits for the next three miles with one of these extending for 12 miles more to the end of the route. However, crossarms were placed to accommodate the expected ultimate needs.

Standard four-pin, six-pin and 10-pin telephone crossarms were installed in the several sections of the line to care for the estimated ultimate needs of one, two and four circuits, respectively. These arms have 12-inch pin spacing which was considered necessary to provide adequate wire separations for the spans concerned. In order to maintain the required 30 ins. climbing space, the pole pins of the 10-pin and six-pin crossarms were not used; and on the four-pin crossarms, used for an ultimate of one telephone circuit, both wires were attached to the same end of the arm.

For this type of power circuit, the

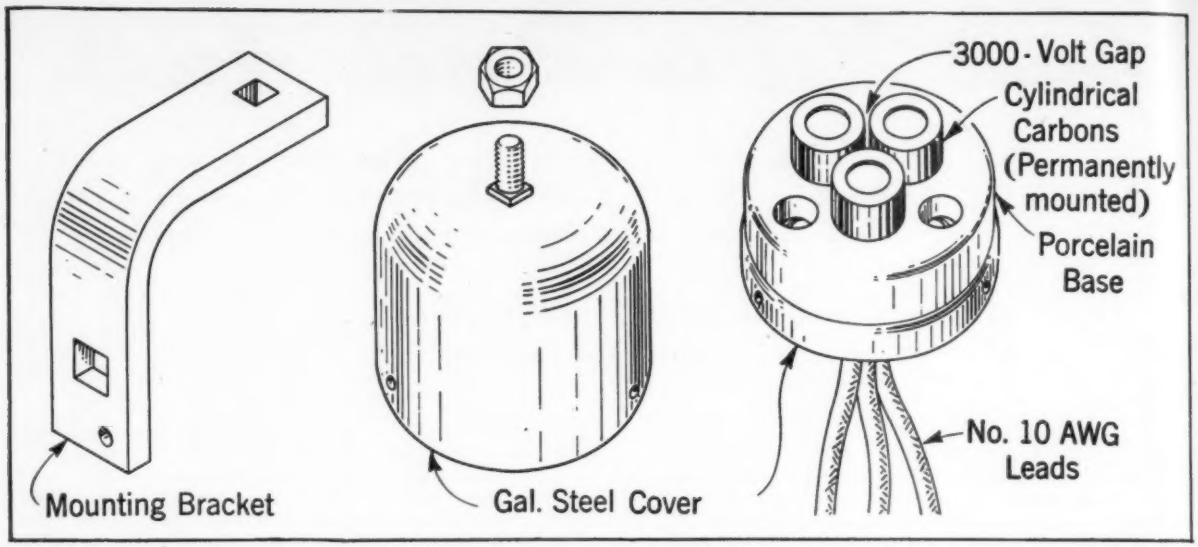


Fig. 2. Open space protector showing symmetrical arrangement of three-electrode 3,000-volt gap. Lead wires may be used interchangeably for connecting to ground and to telephone wires.

National Electrical Safety Code requires a minimum vertical separation of 40 ins. at the pole and 30 ins. at mid-span at a temperature of 60° F. and no wind. In the case of long span construction, however, it is also necessary that consideration be given to the line of sight between the points of attachment of the telephone conductors as compared with the lowest point of sag of the lowest power conductor. This is necessary to guard against the possibility of contact during telephone stringing operations and maintenance repair work. For this trial installation, it was decided to maintain the line of sight between the points of attachment of the telephone wires at a distance of at least five feet below the primary power wire at mid-span and at least 1.5 ft. below the neutral power wire at mid-span under conditions of initial sag of the power wires. To meet these requirements the telephone wires were in general attached 5.5 ft. below the neutral, with increased separation being provided where required because of longer spans.

In addition to the normal protection at the subscribers' stations, supplementary protection was provided by the installation of open space protectors *(Fig. 2)* installed on each telephone circuit at approximately one-half mile intervals. In case of contact between the power and telephone wires, these protectors will discharge to ground at approximately 3,000 volts. The grounding conductor used for the protectors is connected to the multi-ground neutral. Computations indicated that, using this arrangement, the power circuit would be deenergized in a very few cycles, in case of contact, through operation of the power circuit breakers. The coordinated protective devices in both the telephone and power supply circuits make this installation, from a safety standpoint, comparable to joint use with lower voltages.

Since undesirable potentials would be impressed on the open wire telephone circuits due to electric induction, it was necessary to give consideration to some method of drainage in order to hold these potentials within satisfactory limits. It was decided to use a condenser with a balanced mid-point tap (.125 mf to mid-point) for this purpose. A condenser of this type was bridged across each telephone circuit at approximately 2.5 mile intervals with the mid-point grounded to the multi-grounded neutral of the power system. To avoid serious impairment in the transmission of the telephone circuit, matched 10,000-ohm resistances were inserted on each side of the ground connection. Carbon blocks were installed in parallel with the condensers and resistances to protect the

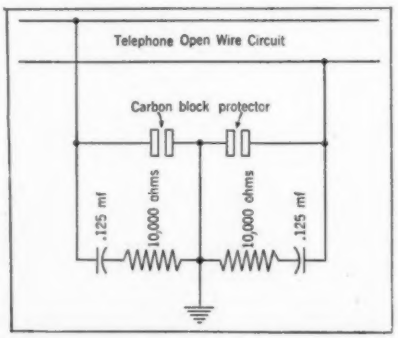


Fig. 3. Drainage unit consists of matched condensers and resistances with mid-point grounded. Carbon block protector guards against lightning damage.

drainage unit from damage due to lightning or power contact. *Fig. 3* illustrates this drainage unit as assembled for the trial installation.

With this drainage arrangement, the open circuit voltage to ground on the 16-mile telephone circuit as measured at the cable terminal pole was approximately 80 volts and when connected through the entrance cable to the central office, it was further reduced to 40 volts. When the circuit was terminated in a balanced long line circuit installed at the telephone central office the induced voltage was again reduced to approximately 11 volts.

During construction the telephone wires were laid out on the ground and later placed on the crossarm to minimize the possibility of their being flipped up into the power wires. The wire reels were grounded throughout the pulling operation, and the wire was pulled across temporarily grounded transposition brackets or across a grounded conductor placed temporarily along the top of the arm at scattered points. This was for the purpose of reducing to a minimum the induced static charge on the telephone conductors during the pulling-in period. Similar grounds were kept on the wires at scattered locations until permanent drainage devices could be installed.

Transpositions were placed in the telephone circuits in accordance with a new transposition design which was developed for rural line construction and which may also be used on other exchange open wire lines. This design consists essentially of transposing each pair at every other pole. However, in order to limit crosstalk between adjacent circuits, the transpositions on any two adjacent pairs are "staggered"

so as to fall on different poles. If the poles are numbered consecutively, this will result in transposing one-half of the circuits on the even numbered poles and the other half on the circuits on the odd numbered poles. To limit crosstalk in non-adjacent circuits certain transpositions are omitted at about two-mile intervals. Because of the simplicity and uniformity of the design, it easily can be laid out and installed by the construction forces without requiring any specific engineering. In addition, it will not be necessary to keep detailed records of the locations of transposition points, and circuit extensions may be made by merely continuing the transposition scheme without regard to basic sections.

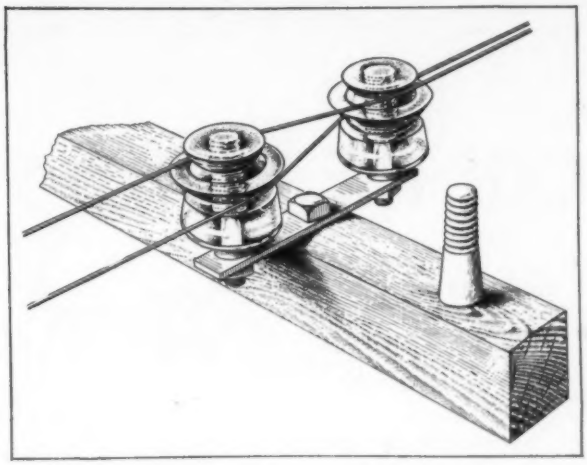


Fig. 4. New "point" type transposition bracket with wires in place. Insulator ties are not required on these brackets.

In order for this transposition scheme to be economically practicable in rural line construction, it was necessary to develop a relatively inexpensive "point" type transposition bracket. The new point type bracket is illustrated in *Fig. 4*. Since the length of wire required to transpose with this type of bracket is relatively small, for span lengths in the range of 450 ft. the transpositions can be thrown after the wire has been tensioned in long sections without readjusting the sag.

Electrically balanced telephone central office equipment and telephone sets having very low admittance unbalance to ground were used in order to minimize the effects of telephone unbalances on noise. The sets used on this trial line were equipped with a three-element cold cathode tube in the connection to the ringer which is normally grounded. The control gap of this tube is bridged across the line and the subset ringer is connected through the main gap to ground. In the case where a telephone subscriber was also a power customer, the interconnecting of the power and telephone grounds provided very low grounding resistance through the multi-grounded power system neutral, an arrangement which is advantageous from both the ringing and safety standpoints. Tests indicated the noise induced on the telephone circuit to be very low with tube sets and balanced central office conditions.

In conclusion, it appears that this joint use method developed by the Commonwealth & Southern Corp. and the Bell System on this line of the Alabama Power Co. technically is a feasible method of providing both types of rural service in a great many cases. It provides a good talking circuit. It requires few modifications of existing equipment and these can be quickly installed as soon as men and materials are available. It will conserve materials and labor. The safety requirements both for telephone personnel and telephone subscribers can be easily met. Channels are already established whereby new projects can be considered and cleared, through established coordination committees.

This method will probably not be suitable in all types of situations. Certain subscriber densities and locations may require other methods. Work presently is going on with development of rural telephone service using carrier systems over power wires. There also is the possibility of using carrier on the telephone lead and this is being investigated. The use of radio-telephone service is still another possibility. All these methods of providing telephone service are being considered in addition to the familiar open wire line and, in some sections, buried wire or cable may even supplant this.

While the economics of this particular type of construction have not been fully worked out, it seems to offer sufficient promise of having a valuable field of application to justify continued work and additional trials and experience.

»» "Nobody can think straight who does not work. Idleness warps the mind. Thinking without constructive action becomes a disease."—Henry Ford.

»» ***The ATRHTRBAA—Association to Remind Husbands to Remember Birthdays and Anniversaries—has been formed, its procedure being to telephone a husband to remind him he'd "better get that gift for his wife, or else!"***

»» ***"That unimpressive looking length of wire snaking its way back through the jungle, or across the hot kunai grass, is an integral part of modern warfare. That wire you stumbled over and cursed, that wire you kicked viciously or ran over with your vehicle, well might contain your fate, whether you are a general or a private.***

"If that line goes out, much may go with it. The lives of fit fighting men may be sacrificed, and a sector may be wiped out. A line out causes a weak spot, on which the enemy can close in viciously.

"Tanks and artillery have to be employed at the right moment. The fire of mortars, anti-tank guns and machine guns must be co-ordinated carefully. The commanding officer has to be informed of what is taking place—what the enemy is doing, how his troops are making out, what he needs now, what he will need tomorrow. The bravest and best equipped troops in the world are of little value unless they are put to use at the right time and in the right spot.

"Communication makes co-ordination within a fighting unit possible.

"Wire is the ever ready, reliable stand-by."—First Lieut. G. A. Barrett, Marine Corps Gazette.

CAN THE UNITED STATES

Afford Public Ownership?

By FRANCIS X. WELCH
TELEPHONY's Washington Editor

An address before recent Forum on Public Utilities of the Investors League, Inc., in Chicago, in which Mr. Welch warns that public ownership is sneaking up on us. . . . He tells why the investor, businessman and laboring man cannot afford government owned utilities.

THE question posed by the topic of my discussion takes in a lot of territory. It was intended to do so. Unless we consider the public ownership program in its entirety—as a complete picture—we cannot rightly or safely judge its political and economic consequences. It is both wrong and dangerous to regard public ownership as something static—something that necessarily is confined to one nation, or to utility industries, or even as confined to one type of public utility as distinguished from other types of utilities.

Public ownership *can*, of course, be contained indefinitely in any given economic area provided the responsible authorities conscientiously make up their minds as a matter of government policy to do so. But such a decision, in itself, assumes that the whole vast potential of public ownership in all forms of enterprise has been considered, and that it has been resolved firmly to restrict public ownership to a specific area.

Unfortunately, we Americans never have faced this issue fairly, squarely, and realistically. This whole question of public ownership in the United States suffers from an almost universal confusion brought about by systematic camouflage of gradualism, subterfuge, evasion and downright deception, so that the average well-informed American citizen does not know today how much public ownership we already have or how much we are going to get. Consequently, he has not the slightest idea of how much we ought to have, if he has ever thought of the matter at all.

It is not unfair to say that public ownership in this country has been sneaking up on us. Every well-informed American citizen, with the possible exception of the Supreme Court of the United States, realizes today that the primary function of TVA is to make and sell electric power. Yet the preamble of the TVA Act, as passed by Congress in 1933, did not even contain the words "electric power."

So it has been with other ventures by the federal government into the business of making and selling electricity during the past decade or more. They had been urged originally as national defense measures, as irrigation and navigation improvements, as flood prevention and almost anything else except what everyone concerned knew perfectly well they really were—public power production schemes. Today, the proponents of these ventures commonly admit that it was necessary in the beginning to stress these strictly governmental activities in order to get around the Supreme Court, to give public power production a protective coloration of constitutionality. Today, apparently, such masquerading is not any longer regarded as necessary.

Now, I would not be so foolish as to contend that these various riversheds, never should have been developed. On the contrary, it should be clear to all that private enterprise in the electric power field, for instance, is not in a position, and cannot reasonably be expected, to make vast expenditures necessary to develop our rivers for both hydroelectric power production and these various other features. It goes without saying that these other functions are properly governmental, and where the physical circumstances of river development are such that it would be wasteful to develop such functions without, at the same time, including power production facilities, then it is only common sense to have the government go ahead and do the whole job.

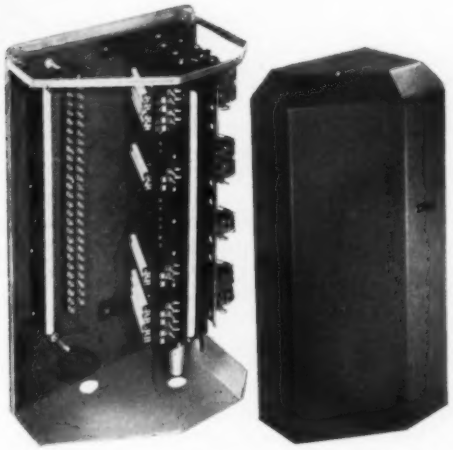
But I do contend that the method of evasion and subterfuge we have been following in this respect is one which, by its very nature, prevents the American people and their chosen representatives from exercising impartial and intelligent judgment as to whether they could not more economically be developed in some other way, and whether in the long run we can afford these commitments, with due consideration of other expenses which inevitably will go along with them.

So far, I have been speaking broadly only about *new* government ventures into the field of public ownership of utility operations — operations which previously were not even in existence. Here, again, we do not get the whole picture of whether we can afford public ownership, unless we consider also the ultimate potential of government operation of utility properties.

We must recognize that the public movement is intrinsically a dynamic force. The further it progresses, the

Type TN

INTERIOR CABLE TERMINAL



The Type TN Interior Cable Terminal is a unit of the Trans-Mount System which provides for the termination, protection and distribution of paper wrapped, lead covered cable serving P.B.X. units and unattended exchanges. No silk and cotton switchboard cable tip is required. Type H-20T Dual Gap Protector units provide primary protection with fuses and high potential dischargers and secondary high potential protection after the fuse is blown. These units are installed only as required. Outstanding features of this terminal are the ease with which cross connections may be made and changed under nut and washer terminals and the 100% working accessibility provided by the completely removable cover of the Terminal Vault. Furnished in 26, 51, and 101 pair sizes. Can be furnished with or without cable stubs.

The TRANS-MOUNT SYSTEM

The Type TN is a part of the Cook Trans-Mount System of Protection and Distribution. The Trans-Mount System is composed of the Type TN Interior Cable Terminal, the Type R Sub-Station Protector, the Type T Main Distributing Frame, the Type S-20 Pole Cable Terminal, the Type U Utility Sub-Station Protector, the Type UA-20 Aerial to Underground Terminal and the Type IT-20 Interior Cable Terminal, all using the Type H Protector Unit.

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more momentum it picks up, for reasons which I shall discuss presently. If we, as a nation, follow our present policy of drifting, of letting public ownership sneak up behind us, as it were, we shall inevitably find ourselves on a runaway economic express train which we will no longer be able to stop, short of its ultimate destination. That destination is complete public ownership in all lines of public utility operation, if indeed we can stop it there.

The sensible thing to do, therefore, is to consider now, while we still have the situation within our control, whether we want to go to such a destination, whether we can afford it and whether we will be better off when we get there. If, after making an honest deliberation of all relative facts, the majority of the American people decide that that is what they want, then all right —all aboard and may God speed the venture. But if we decide we want to get off—that we can't afford it—there is no time to lose. We are already well on our way and picking up speed.

Up to now our Congress has been following a blind, down-payment-plus-instalment policy of piecemeal commitments which inevitably will lead to greater and greater expenditures. Time and again the administration has come to Congress and asked first for modest sums to make field surveys and paper plans. Next came requests for preliminary work; the following year, funds were wanted for "roughing in" or completing some section or portion of a project. Sooner or later Congress found itself committed to such an extent that it had to go all the way to salvage the investment already made.

TVA was started with a modest request for 50 million dollars. Today it represents an investment of nearly three-quarter billion dollars and is still going strong. Only in the case of Boulder Dam was the actual final picture of the entire cost of a completed major multi-purpose federal project, with plans for operation all worked out, put before Congress at one time and approved on that basis.

The American people have been put in the position of the foolish fellow who many years ago was seen stuffing a silver dollar down the crack of an old-fashioned boardwalk. When a neighbor asked him why in the world he was doing such a thing, he said:

"Well, I accidentally dropped a quarter down the crack, and then I decided it wasn't worth the bother to tear up the boards for a measly little quarter, so I just chucked a dollar down the hole to make it worth my while."

Let's see what complete public ownership of all our utilities would cost. From the best references I could find, I estimate that the total private investment now outstanding in all gas, electric, communications, and transportation, including railroads, air lines, local transit, trucking and water carriers comes to the imposing figure of 60 billion dollars. Now, assuming we are determined to have our government, whether federal, state, local, or any combination, take over these utility operations, there are only two ways the government can do it. We can either buy these projects or we can steal them.

FRANCIS X. WELCH

By stealing them I mean using the government's sovereign powers to take them away from their present owners by confiscatory methods which do not give the owners fair compensation for their investment. That sort of thing has happened before, many times in foreign countries. But, so far our government in America has not yet resorted to legalized stealing of its own citizens' property. Therefore, we must assume the other alternative. That means that the bill for merely acquiring these utility properties would involve a new debt obligation of around 60 billion dollars.

Already we have a national debt of 300 billion dollars. The tax burden of servicing this debt alone, at 2 per cent interest, will mean that we must continue to raise six billion dollars a year. If we add to that an estimate of annual expenditures which are going to be necessary for carrying on the regular activities of the federal government, plus the upkeep of our increased armed forces, it looks very much as if we are going to have to raise taxes sufficient to support an annual postwar federal normal budget of at least 15 billion dollars and perhaps double that amount. This allows not one cent for retirement of principal on our national debt.

If the American people were just to stop and consider this vast obligation, I have not the slightest doubt that they would turn thumbs down on any proposal to raise this debt from 300 billion to 360 billion, simply in order to acquire title of all of our public utilities which already are serving us so successfully, and which is about the only major business that went through the entire war without either rationing or price increases to the public. Such a proposal would be tantamount to installing public ownership for public ownership's sake. It would mean an increase of government debt obligation amounting to nearly $500 for every man, woman and child in the country. And for what? For the mere privilege of having the government operate utility properties.

But this 60-billion dollar debt would be only the beginning. As we used to say about purchasing a high-priced motor car years ago: "It isn't the initial expense, it's the upkeep which really gets you down." It is one of the perverse ironies of a progressive socialization program, that while it imposes more debt burden on the taxpayer, at the same time, it subtracts from his ability to bear that very burden. This is because public ownership converts tax-paying privately owned enterprise into tax-exempt, and in some cases even tax-subsidized, public enterprise.

Here, again, we witness the danger of a drifting policy of gradualism. It ought to be perfectly clear that every dollar shifted from the tax-producing sphere of private business to the tax-eating sphere of government operations means a dollar less of pulling power and a dollar more of load to be pulled.

In the beginning, these relatively small unit subtractions from the tax-producing sphere, to be added to the tax load, may not be noticeable. Individual projects can be, and generally are, justified on their own merits. But the cumulative effect of a series of such expansion of the tax-eating sphere (at the expense of the tax-producing sphere) hastens the day when the latter simply cannot afford to carry the former. The end of the road is a breakdown of the enterprise system generally.

The gas, electric and telephone utilities alone, with a total plant investment of more than 25 billion dollars, paid taxes in 1944 amounting to more than a billion and a half dollars. That means that if these three great utilitity industries had been socialized in 1944, the rest of us taxpayers would have had to make up the better part of a billion and one-half tax revenues for that year alone. This is because government utilitity operations are very largely tax exempt.

And still, we have not come to the end of the sad tale of the loss of tax-

(Please turn to page 28)

The Facts About STROWGER AUTOMATIC and Automatic Toll Dialing

Strowger Automatic was the first type of automatic telephone switching equipment to be employed in any toll dialing network. The techniques developed by Automatic Electric engineers for such networks have long been in wide and successful use both in the United States and abroad.

In networks involving long distances and many tandem switching points, it is sometimes desirable to employ impulse registering and translating facilities, so that an operator can extend a call to a distant exchange by dialing the code number assigned to that exchange regardless of the number of tandem switching points through which the call must pass.

In the Strowger system such facilities are provided by the "Director," a simple combination of standard Strowger components which can be included in any initial installation or added at any later time, as needed. Strowger Director techniques were perfected long years ago. Standardized as far back as 1924, they are in extensive use today—in the London metropolitan area, and in other networks, both local and toll, in various other parts of the world.

In Strowger Automatic toll networks operating in limited areas, Director facilities are usually not provided, simply because they are not needed. This is in contrast to automatic systems in which register-translator facilities are an integral part of the switching mechanism and *must* be used whether or not the trunking conditions require them.

Strowger Automatic equipment is thus adapted to any automatic toll dialing network, whether it serves a limited area, or a nationwide area having a universal code numbering scheme for main and tributary switching points.

This flexibility of Strowger equipment for meeting toll dialing requirements is well known to competent and informed telephone engineers, and is here set forth for the information of non-technical telephone men who have the right to be correctly informed on modern toll dialing developments.

AUTOMATIC ELECTRIC

Originators and Developers of Strowger Step-by-Step Machine Switching Automatic Dial Systems
Makers of Telephone, Signaling and Communication Apparatus . . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions

AUTOMATIC ELECTRIC SALES CORPORATION, 1033 W. Van Buren St., Chicago 7, U. S. A.
Export Distributors: INTERNATIONAL AUTOMATIC ELECTRIC CORPORATION

STROWGER EQUIPMENT AT JAMESTOWN, N. Y.
The Jamestown telephone corporation also uses Strowger Automatic telephone equipment in its six smaller exchanges, which are operated on an unattended basis; this "all Strowger" network serves a total of more than 12,000 telephones.

Experience vs. Experiment

CONVERSION OF A TELEPHONE SYSTEM to automatic operation is a "once in a lifetime" proposition for most exchanges. It cannot, with financial safety to the owners of the business, be made a matter of experiment.

THE FINANCIAL SUCCESS of the conversion will depend upon the year-by-year cost, for many years, of the operation, maintenance and replacements of the automatic equipment. It is the telephone company that takes the risk when those costs cannot be known with reasonable certainty before the equipment is purchased.

STROWGER AUTOMATIC TELEPHONE EQUIPMENT is the only automatic telephone switching equipment manufactured for Independent telephone companies and suitable for large multi-office areas as well as for single-office exchanges, large or small, of which the costs of operation, maintenance and normal replacements can be predicted with reasonable accuracy. Strowger is the only such equipment that has been in use in the United States long enough and in a sufficient number of exchanges—multi-office and single-office, large and small—to provide the records upon which such costs can be based.

FIFTY YEARS OF STROWGER OPERATION in the United States have proven, as to costs and otherwise, that telephone companies are not experimenting when they install Strowger!

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producing power through government ownership. The fact is that the sphere of tax-producing private enterprise receives a *triple* blow every time a transfer is made into the sphere of tax-consuming public ownership, in this manner:

First, we have the loss in greater part of the taxes which the displaced privately owned utility used to pay, including real estate, corporate income, special excise taxes, and so forth.

Second, we have a tax loss of amounts which the private investors in the securities of the displaced private utility used to pay, as income taxes on their annual earnings from such securities. These, presumably, would be supplanted by tax-exempt revenue bonds or other forms of governmental security.

Third, we have a substantial tax loss through the drain on treasury funds to provide subnormally low interest rate money to finance the acquisition of such properties. The difference between what private business has to pay for the use of money, and the low government rate, represents an indirect subsidy to the extent that private investment is deprived of the opportunity for participating in these ordinarily commercial enterprises at a higher return to the investor.

Yes, I think if the American people were confronted with this total picture of an increase in government debt amounting to 60 billion dollars, carrying along with it an annual loss of tax revenue of some additional billions of dollars, they would have no hesitation in making up their minds that total public ownership of utilities is something that we cannot, as a nation, afford—all other considerations to one side.

But the objection is bound to be made that only a few extremists at this time are seriously proposing that the government nationalize all forms of public utilities, or even one form of public utility, to the extent of complete extinction of private enterprise therein. This objection overlooks the dynamic quality of public ownership, which is very plain to those who would ponder the history of it both here and abroad.

Today, there is virtually no public ownership existing in the gas and telephone business in the United States. Until 1932, public ownership in the electric power industry was fairly small —about 5 per cent—and more or less static. About that time certain governmental policies were set in motion which have encouraged public ownership in the electric power industry until, in 1944, publicly owned plants were producing 18¾ per cent of all power generated in the United States.

These policies took the effect of a three-pronged pincer's movement which resulted, if they were not expressly designed to do so, in actively increasing public owned power operations. The first prong was direct federal investment in the form of public works expenditures, such as TVA, Grand Coulee and numerous other projects. The second prong took the form of federal aid or loans and outright grants to promote public ownership by states, municipalities and largely tax-exempt cooperative ownership of electric power facilities, as exemplified in REA operations.

It is interesting to note, in passing, that this loan grant policy which, in effect, bribed the people with their own money to embark on public ownership ventures, was successful almost in direct proportion to the amount of federal money made available for that purpose. I mean by that, that the number of substantial local public ownership elections increased from 93 in 1934 to a high-water mark of 172 in 1938, which was the peak of PWA activity. They tapered to 49 in 1939 after the PWA budget tapered. Since the war began there have been only a handful because PWA folded up and the federal hand-out money is no longer available. If we go in for another big public works program in the postwar era, it is quite likely this stimulus to public ownership will start up again.

Native lineman of Ceylon, an island off the south coast of India, roped to his post. Photo given to TELEPHONY by KNOX PORTER, son of J. R. PORTER, chairman of the Carolina Telephone & Telegraph Co., Tarboro, N. C.

The third prong of the pincer's movement, which has surrounded private enterprise in the electric power industry, has been the operation of the Holding Company Act. Under this law, large utility systems have been and are being compelled to sell off or otherwise dispose of local properties under circumstances where only municipalities and public agencies can afford to bid for the orphaned properties. These circumstances have largely to do with the capitalization of the tax-exempt features of public ownership I mentioned previously. During the last decade over a quarter of a billion dollars' worth of utility properties, formerly owned and operated by business managed companies, have thus been moved into the sphere of public ownership as a direct result of this statute. That figure is not too large as compared with the total investment in the electric industry. But the important thing is that it is growing with each passing month, and that every single dollar transferred from the tax-producing sphere to the tax-exempt sphere is dead, gone, lost forever as far as active support of our economic load is concerned.

It is difficult to do more than estimate just what the direct expenditure of the federal government in public power facilities is at the moment—aside from the loans and grants which were made to states and municipalities under the PWA program. It is probably safe to say that the federal government now has an investment somewhere in the neighborhood of two billion dollars in various multi-purpose projects which include power features. Of this amount a total of a half-billion dollars has been allocated for power purposes. This makes no allowance, of course, for various projects in contemplation, such as the St. Lawrence seaway. Added to this we have a half-billion dollars in loans to REA co-ops, most of which will presumably be returned in years to come.

At this very moment the House Appropriations Committee is considering recommendations by the Budget Bureau for over $200,000,000 flood control, navigation, and irrigation projects, many with large power features, for the army engineers and Bureau of Reclamation for next year alone. Everyone of these federally owned and operated power plants operates under discriminatory laws and administrative policies which makes it almost a certainty that local public ownership by cities and public utility districts, etc., will have to be established in the realm of distribution and transmission to supplement federal power generation. Federal power agencies seem willing to sell their power to business managed util-

ities only as a last resource, and for as brief a term as possible.

Viewed in this light, public ownership is like an economic cancer — a pocketbook cancer. Under constant supervision and precautions, its growth can be arrested for years. But continued recklessness and neglect of restrictive safeguards, for the soundness of our general system of private enterprise, invariably leads to a breaking out of this growth in a virulent state.

So far, for example, only a handful of smaller American cities has seen fit to go into the gas business. But we have left over as a heritage from our war production, the Big Inch and Little Inch pipe lines. I predict that unless some steps are taken and some program formulated to return these lines to private industrial operation, or keep them indefinitely as a military reserve, there inevitably will emerge a demand that the government operate them. The same thing goes for the surplus aluminum and magnesium plants which the government built during this war and some of which will have to be kept in operation if some of our federal power plants are not to run into a heavy surplus of unused power.

This pattern should be familiar to us from experience. In every surplus government war plant there lingers the germ of public ownership, just as it lingered in the Muscle Shoals plant left over from the last war and broke out 15 years later in the form of TVA.

Already we see signs of the entering wedge of public ownership under the doorstep of our great telephone industry. Only a month ago Secretary of Agriculture Clinton Anderson recommended to the Senate Agriculture Committee the enactment of the so-called Hill Bill. This bill would put the REA in the rural telephone business. More than that, it would make it a statutory necessity that REA give first preference on loans for rural telephone service to states, municipalities, co-operatives, and other political subdivisions. Now, if that is not encouraging the establishment of public ownership in the telephone industry, where today it is virtually nonexistent, then I don't know how to read the English language.

I cannot emphasize too much this indivisibility of the public ownership movement. It cannot, once it gets uncontrolled headway, be confined to a particular industry, or part of an industry. As soon as one great utility industry is overrun, another already will be well under siege and still a third under prospect. In Great Britain it began first—years ago—by taking over the railroads and the telephone business. Yet it was confined there, for a while, and only made partial incursions in the realm of gas and electric service. But, with the recent election of a Labor government, the public ownership movement in Great Britain has burst wide open again and, what is more, we, the American taxpayers, are being asked to finance its further triumphs.

On the same day, earlier this month, Prime Minister Attlee stood up on the floor of our own House of Representatives and assured our Congress that the Labor government in Great Britain has no intention of embarking on any drastic or revolutionary ideological course. Reliable London reports published in the American press indicated a Labor government decision to hasten the nationalization of gas, transport, electricity, iron, steel and engineering industries and to limit public investment to the luxury trade.

The same old familiar pattern is already unfolding itself in France. On November 6 the left-wing bloc in the new French Constituent Assembly demanded sweeping nationalization of the nation's key industries. Enterprises which would be nationalized include the Bank of France and other large credit institutions, insurance companies, all gas and electric utility companies, merchant marine, coal mines and steel, light metal manufacture, chemicals and munitions.

As in the case of England, there are doubtless many in France who expect that American funds, by way of credits, will be made available to finance this socialization. This is certainly one thing we ought to stand firm about. If our American system of free private enterprise cannot afford the financial drain and the usually unfair competition of public ownership in this country, certainly we cannot afford to finance public ownership for other countries. Our great elder statesman, Bernard M. Baruch, saw this danger so clearly and expressed it so eloquently that I would like to quote only a brief passage from his recent letter addressed to a number of junior congressmen:

"We must be careful, when we give aid to other countries, that this aid is not used to nationalize their industries against us, to destroy our own competitive system which, I think, should be preserved. England, Czechoslovakia, France, and other countries are nationalizing or are about to nationalize their industries. Russia has totalized herself—one buyer and one seller—and is totalizing all countries coming under her aegis."

With this familiar pattern of the public ownership movement so often repeated, it is surprising that there still are a great many businessmen and private investors in this country who fail to see that what is happening to our electric industry today will happen to the gas, to the telephone, or the railroad or shipping business tomorrow unless we block it now. They seem to think that the public ownership movement can be stopped after it has overrun one utility industry or all utilities. They fail to see that the electric power industry in America is only the first trench, and the other utility industries are only the secondary trenches, which stand between private enterprise generally in this country and a rising tide of socialization.

If these successes of public ownership abroad had resulted in better service for more of the people, there might be more justification for thinking about it over here. But what has been the record of public utility service abroad, as

POSTHOLES FOR SALE

A member of a defense plant corporation in Dallas, Tex., listed for sale to the highest bidder 19 postholes. The following reply was published in the November 21 issue of the Pueblo (Colo.) *Star Journal:*

Defense Plant Corp.:

Dear Sir—I saw an article that you had 19 postholes that were considered surplus property. As I have a fence to build over some very rocky ground I might be interested in a few of them.

You did not state in your article just what size these postholes come in. Whether they are for high line work using black diamond poles, or just the plain lodgepole pines that grow in this locality. Or they may be just postholes to be used in common fence work.

In years past I worked under the secretary of interior, also with the forest service as well as having a job at Camp Hale. So I know that the government should have several blue prints on the said postholes.

I would like to know the diameter of these postholes and whether they taper or are of the bell-bottom type. If you could give me a price on these postholes FOB Buena Vista, Colo., I would appreciate it. I know it will take some little time as you will probably have to get a ceiling price decision from Chester Bowles of the OPA on just what they are worth. In case I wish to sell a few of them to my neighbors you would not happen to know just what I would be allowed to charge without getting mixed up with the different bureaus by overcharging.

Hoping my letter arrives before they are all disposed of, I remain,

Yours truly,
R. W. (JACK) LAMER,
Buena Vista, Colo.

compared with the United States? French government telephone service prior to World War II was a vaudeville joke. Australia was set back years in her development because state owned railroads could not even get together on standard gauge track. Even such an elementary thing as electric voltages and cycles were largely unstandardized in European countries. Government owned public utility service in prewar European countries was generally largely a luxury for the well to do. The United States by contrast has over half the telephones in the whole world —more miles of railroad system and equipment—more kilowatt-hour capacity — more and better utility service generally than other countries on the face of God's green earth. Free private American enterprise gave this to us, after pioneering inventions and technical development. Why do we want to change to the old world, half-starved European system, simply because temporary and somewhat illusory advantages by way of rates consumers may pay are dangled before our eyes?

As to utility rates, we have heard a great deal about government utilities operating as yardsticks to keep the rates of business managed utilities in check. But somehow we never hear about the important role which business managed utilities play in keeping government utilities in line. If we ever had complete public ownership of utilities, this check would be removed. More than that, utility consumers would find themselves at the mercy of an unregulated publicly owned monopoly because the private companies which for many years have been closely regulated as to rates, etc., would be out of the picture.

Now there is an old saying that a new broom sweeps clean. There is little doubt that these relatively new government ventures in the utility field, such as TVA, have had the advantage of able and honest leadership, such as TVA Chairman Lilienthal and Bonnerville Administrator Raver. These officials are anxious to operate government properties as successfully and as economically as possible. But if government utility monopoly became a fact, and the new broom wears out, and the Lilienthals and Ravers disappear from public service, who would guarantee that some federal or local version of Tammany Hall would not take over these properties with complete impunity and make the public sweat for it? Can the utility consumer afford this lack of protection?

Finally, I want to repeat that I do not contend that public ownership of utilities has no place in the United States. I have already referred to circumstances, such as river development, where government ownership to some extent is absolutely necessary. But I do contend that the American people are within their rights in insisting that since our nation's economy is based on private enterprise, public ownership be limited to those situations where private enterprise cannot or will not step in and do a job that needs to be done.

The American people have the right to a clear cut analysis, in such circumstances, of just why and how much public ownership is necessary. Such an analysis should be free of double talk, double bookkeeping, and double standards of operation and regulation. If, for example, it is deemed necessary to prevent floods and improve navigation on a certain river and if floods can be prevented by dikes and levees for less than 100 million dollars and navigation separately improved for a similar amount, I submit there is no justification for spending many times the sum of those two figures for grandiose multipurpose projects simply in order to work in public power. Where public power plants must be built, private enterprise ought not only be permitted but *encouraged* to participate in transmission and distribution, at least on equal terms with public agencies. In any event, government ventures in the utility field should be self-supporting and not use the taxpayers' money to subsidize particular local classes.

I hope what I have said will lend conviction to my thesis that the United States cannot afford public ownership of utilities, except in limited cases, where there is absolutely no other course to take. The investor cannot afford it, because it undermines the soundness of all investment. The businessman cannot afford it because it contains the germ of encroaching unfair government competition. The laboring man cannot afford it because public ownership sounds the death knell of labor's right to strike and bargain collectively. The consumer cannot afford it because it removes the protection of regulation and the guarantee of efficient and aggressive utility operation which has given America today the best and most public service on earth.

A Grab for the Telephones

Another step away from freedom may be made if Congress passes a bill now before the Senate which would establish "Rural Telephone Authorities."

The bill simply provides that the federal government may set up telephone systems in "rural" areas, where private telephone exchanges have less than 10,000 subscribers. That means darn near every place in the country outside the big city centers.

Author of the bill (S. 73) is Senator Lister Hill of Alabama. In an attempt to show that farmers of the country are short in telephone service, Senator Hill picked out some ridiculous figures which are far from the truth. They probably apply to Alabama where poor whites and share croppers have the lowest economic rating in the nation—and couldn't buy a telephone if it cost only two bits a season.

When people cannot afford shoes or decent food, it would seem that something of greater value should be done for them than offer them untaxed telephone service that they probably wouldn't use anyway.

But the economic situation of Alabama backwoods folks is not the big issue of this bill. It is rather the fact that it is another step on the road of government in business at the expense of private concerns which pay tremendous taxes, another load for taxpayers to carry.

If there is any line of private business that has given top service at reasonable cost, it is the American telephone companies. If you think not, try telephoning in Mexico, Canada, England or any European country.

*Government in this country has its hands full now and the taxpayers can ill afford any added loads in the shape of telephone administrations, Missouri Valley Authorities or any other of the socialistic schemes.—**The Lake City (Minn.) Graphic.***

THE PLANT MAN'S NOTEBOOK

BY RAY BLAIN • TECHNICAL EDITOR

DURING the war, the Army developed a method of laying wire at the rate of two miles an hour. This wire can be fired from a bazooka or laid from an airplane at the rate of two miles per minute. It is believed this plan may have numerous peacetime emergency uses in connection with floods and storms.

* * *

It is noted that aluminum paint now is being used extensively to protect metal roofs. In the past, black or red paint generally was used for this purpose. Aluminum presents a much better appearance, gives protection against rust and corrosion and is a good reflector of heat. Brick chimneys present an excellent appearance when painted with aluminum.

* * *

A reader states that, due to the construction of a new power line, he must replace all except 2½ miles of a parallel grounded rural line with a metallic circuit. He wants to know whether he also should make this section metallic, or leave it grounded and connect the two sections through a repeating coil.

Either arrangement probably will operate satisfactorily; however, we prefer the full metallic circuit. If repeating coils are used, it will be necessary to protect them with arrestors placed out on the line, which may complicate the maintenance problem. Also, the absence of repeating coils will make testing easier and more reliable.

* * *

We are in receipt of a letter from L. H. Snyder, president of the Mijo Telephone Co., Spring Hill, Kan., in which he warns telephone employes that they cannot afford to jeopardize their splendid relationship with the public by interrupting telephone service unnecessarily. Mr. Snyder refers to the recent walk-out of operators in their demonstration of strength, and states, in part:

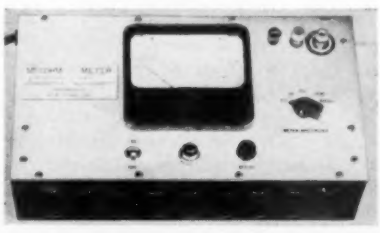
"It has always been our proud boast that telephone workers, both men and women, would go through fire, flood and storm to get to their job and maintain service. Now we have the spectacle of workers leaving their jobs because of a dispute with a government agency, with neither their employer nor the public being involved."

* * *

We wonder why someone does not design either an oval or round telephone booth with a sliding door. Certainly, this would present a neater appearance than a square type booth, be easier to clean, and more convenient in every way.

* * *

Megohm meters which will be found suitable for all insulation resistance measurements of the communication field now are available. These meters weigh eight pounds and possess unusual stability and portability. A range from 400,000 ohms to 100,000 megohms is provided in five ranges on a single scale, 4 in. meter.



This unit offers exceptional protection against atmospheric conditions where precise testing is required. It is extremely stable despite line voltage fluctuations. A change in operating line voltage from 90 to 130 volts produces a change of less than 3 per cent in meter reading at midscale. Single zero reset adjustment is provided for all ranges and drift after initial warm-up period substantially is zero. The set is designed to operate from a line voltage of 115 at 60 cycles.

* * *

A short time ago, the writer had the pleasure of visiting a television studio in Philadelphia, and witnessing a television broadcast. Without doubt, this means of communication has a great future.

* * *

In all probability, a loud speaking telephone will be made available in the near future for those who need it. This probably will be optional, as a regular handset can be used, when desired.

* * *

Experiments now are being conducted with tin foil tape which has an adhesive coating on one side for use in making temporary repairs in lead covered cable.

* * *

In a letter from Fred W. Bechdolt, of the Northwestern Telephone Co., Defiance, Ohio, he comments on the item which appeared on this page in the November 3 issue of TELEPHONY covering the remarks of Paul L. Smith concerning damage to lead covered cable caused by squirrels. Mr. Bechdolt states, in part, as follows:

"We have had three cases of trouble caused by squirrels or at least we blamed them for it. The sheath was damaged less than three feet from the pole. There were no limbs extending over the cable for over one-half mile from this damage."

NORTH CAROLINA STAGES *Successful Convention*

By H. D. FARGO, JR.
President of TELEPHONY

WHILE conventions are for the most part concerned chiefly with business matters, the social side is usually not neglected. When as lovely a site as Southern Pines, N. C., and as choice a hotel as the Pine Needles are selected, the social success is assured. Well over 200 persons attended the banquet concluding the North Carolina Independent Telephone Association convention which was held in Southern Pines November 12 and 13.

Taxes, rural telephone development, toll dialing and new equipment were the main topics of discussion. The convention sessions were presided over by R. S. DuRant, Tryon, vice president of the association, in the absence of W. E. Sparger, Mt. Airy, who has been ill for some time and whose annual report was read. Following the report of Secretary-Treasurer W. E. Olschner, Tarboro, and that of R. M. Tucker, High Point, on convention activities, the audience was given a clear and interesting account of Washington happenings by Clyde S. Bailey, executive vice president of the United States Independent Telephone Association.

In his address, Mr. Bailey urged telephone men to request their senators and congressmen to vote favorably on the passage of the Gwynne Bill. However, the most important pending legislation is the proposal to amend the Fair Labor Standards Act by increasing the minimum wage. The amendment included in the so-called Pepper Bill would increase the minimum wage of 40 cents per hour to 65 cents at the end of 120 days; increase it to 70 cents at the end of the first year, and at the end of the second year, increase it to 75 cents per hour. He told of the testimony given by J. C. Crowley, Jr., St. Paul, Minn., and himself before the Senate and House committees in support of the Independent industry's request that Congress amend the Wage-Hour Act to exempt telephone exchanges having 1,000 stations or less instead of the present 500-station exemption.

"Toll Dialing in Florida" was the subject chosen by Norman Shenk, assistant general commercial superintendent, Peninsular Telephone Co., Tampa, Fla., who prefaced his address with reminiscences of his former years as a North Carolina telephone man. Calling attention to the fact that direct toll dialing had been in practice for over 15 years, Mr. Shenk predicted it will occupy an important place in telephone planning in the years immediately ahead.

He referred to the Bell System's plan which ultimately would include all central offices, both Independent and Bell, in the United States and Canada, and within which network a toll center operator at any point could dial a series of not more than 10 digits and, by so doing and without assistance at any point, build up a toll circuit to any other central office, establishing a connection with any dial telephone in the country.

The Peninsular Telephone Co. adopted dial equipment as far back as 1915 and, therefore, has had years of experience in inter-toll dialing. "Of the more than 3,000,000 toll calls carried wholly over our own circuits, more than 2,000,000, some of route distances in excess of 100 miles, were operated on a toll dialing basis," said Mr. Shenk.

There are 18 exchanges serving over 83,000 stations, and where there are no direct circuits between exchanges, calls are routed through Tampa. This is done by the operator plugging in on one of her Tampa dial circuits, dialing a single digit which causes the switches at Tampa to select an available circuit at the termination exchange, then dialing direct the number she is calling there. The speaker estimated that inter-toll dialing has meant a saving of 13 or 14 positions of toll board and associated equipment and of 60,000 operator hours per annum.

In his address on "Nationwide Operator Toll Dialing," N. H. Saunders, Chicago, engineering manager, Kellogg Switchboard & Supply Co., pointed out that the substantial increase in toll traffic during the war years and the downward trend of toll rates emphasize the desirability of speeding up the completion of long distance calls. By applying operator toll dialing to all or most of the traffic, it is hoped to reduce the average build-up time for long distance connections from 1.4 minutes to one minute. The conversion to operator toll dialing must be effected gradually and it is fully recognized that it may not be desirable or economical to convert all exchanges. Mr. Saunders gave a clear picture of the method by which nationwide toll dialing can be effected, and estimated that 10 to 15 years will be required.

L. L. Ruggles, Chicago, vice president, Automatic Electric Sales Corp., discussed "Equipment Developments." He laid stress on the pressing need for manufacturers to produce as rapidly as possible, and predicted that improvements which are desirable will be made if not at the sacrifice of production.

Mr. Ruggles was followed by Dr. J. O. Perrine, New York City, assistant vice president, American Telephone & Telegraph Co., whose subject was "Television, Coaxial Cable and Radio Relay Systems." He began by classifying the three forms of communication from the standpoint of range of frequency: Telegraph—not exacting; telephone—exacting; televison—very exacting. The speaker made use of considerable equipment to illustrate his talk, and this was especially helpful to the audience in visualizing the properties and features of coaxial cable which were explained in a clear, understandable manner by Dr. Perrine.

The American Telephone & Telegraph Co. is building coaxial cable from New York to Boston, capable of handling 960 telephone conversations,

20 broadcast channels and two television channels. There are now 1,500 miles of this amazing cable in service and the ultimate mileage planned is 6,000, the cost to be $50,000,000.

W. C. Darrow, Tarboro, commercial and traffic manager, Carolina Telephone & Telegraph Co., announced he would "shelve" his paper on "Conversion from Manual to Automatic Service" so that there would be time for Maj. J. K. Avent to deliver his talk on army communications. Major Avent, recently discharged from the Signal Corps, Fifth Army, had served in the European Theater and was able to give an excellent account of how communications serve a fast-moving army. He illustrated his remarks with blackboard sketches.

"The Manufacturer Looks Ahead" was the topic ably covered by Wesley M. Angle, Rochester, N. Y., chairman of the board, Stromberg-Carlson Co. It was easy to see why telephone material was hard to get these past four years when hearing Mr. Angle state that "in 1941 about one-seventh of our production, itself double that of 1940, was for military usage. In 1942 our production doubled again and two-thirds of what we made was for the Army and Navy. By 1943 we were turning out $40,000,000 (almost 100 per cent of our production) of telephones, radios and radar equipment for our armed forces; by 1944, $55,000,000, during the last four years, a total of around $120,000,000." He then told of his company's plans for utilizing the knowledge and engineering talent acquired during the war years in serving the telephone field now that victory is won. This was followed by a description of Stromberg-Carlson's SY system, capable of serving from 100 or 200 lines up. The speaker then took the audience on an imaginary trip through a factory, showing the process of reconversion.

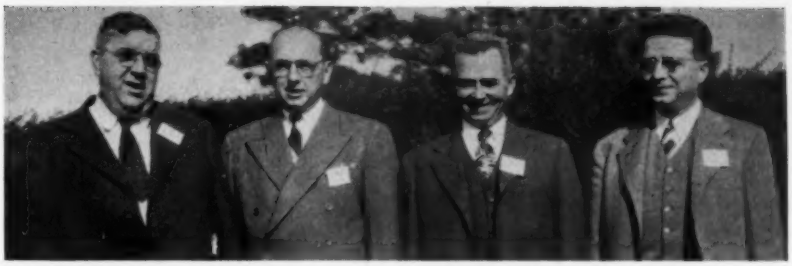
In treating the subject, "Engineering Rural Telephone Service," F. G. La Prade, Martinsville, Va., general manager, Lee Telephone Co., gave his listeners a great deal of worthwhile and specific data, such as class of poles to be used for both light and medium storm-loading areas, guying specifications and wire sags. Other points covered were transpositions, clearances and railroad crossing construction. The average cost of constructing a typical pole line was given as well as the per cent saving by employing long span construction.

The last speaker was J. R. Porter, Tarboro, chairman of the board, Carolina Telephone & Telegraph Co., who has been in the telephone business for 45 years. He touched briefly on rural telephone legislation and urged all operating companies to extend rural service as much as possible to obviate government interference. "No company will go broke serving the rural areas," said Mr. Porter.

Of course, additional plant necessary will be acquired at higher cost than in 1940, he said. For one thing, the old formula of cost—40 per cent for labor and 60 per cent for material—is apt to be reversed, the speaker predicted. He warned of the need to maintain or increase rates to meet increased costs. Mr. Porter closed his remarks by suggesting that courtesy and prompt service to subscribers be the future watchwords for the industry.

Officers elected were: President, Ralph Van Trine, Durham; vice president, Mr. DuRant; vice president, Camden Blades, Elizabeth City; vice president, Robbins Tilden, High Point, and secretary-treasurer, L. W. Hill, Tarboro.

Directors for the new term were elected as follows: Mr. Sparger; E. O. Freeman, Aberdeen; Mr. DuRant; Mr. Olschner; J. E. Blades, Elizabeth City; E. C. Heins, Jr., Sanford; J. D. Morris, Roxboro; Mr. Tucker and Mr. Van Trine.



Newly-elected officers of the North Carolina Independent Telephone Association (left to right): R. S. DU RANT, Tryon, vice president; RALPH VAN TRINE, Durham, president; L. W. HILL, Tarboro, secretary-treasurer, and CAMDEN BLADES, Elizabeth City, vice president. ROBBINS TILDEN, High Point, vice president, was absent when picture was taken.

Officers and directors of the North Carolina Independent Telephone Association and guests at the recent convention (left to right): ROBBINS TILDEN, High Point; J. E. BLADES, Elizabeth City; RALPH VAN TRINE, Durham; L. W. HILL, Tarboro; S. L. BELL, Chester, S. C.; R. M. TUCKER, High Point; R. S. DU RANT, Tryon; E. W. OLSCHNER, Tarboro; E. C. HEINS, JR., Sanford; CAMDEN BLADES, Elizabeth City; J. D. MORRIS, Roxboro; J. E. KIRK, Dalton, Ga.; T. CARTER THOMASSON, Lancaster, S. C., and FRANK LA PRADE, Martinsville, Va.

V V

Sergeant Daubendiek Awarded Bronze Medal

M/Sgt. Robert W. Daubendiek, West Bend, Iowa, has been awarded the Bronze Star Medal for meritorious achievement while serving with the Signal Section of Normandy Base Section. He now is stationed at Chanor Base Section Headquarters in Brussels.

A former telephone manager in civilian life, Sergeant Daubendiek was employed by the West Iowa Telephone Co. He entered the Army in March, 1943, and has been overseas for the past 23 months.

The citation accompanying the award reads in part:

"Sergeant Daubendiek ably assisted the engineering and installation officer in the planning and supervision of all major signal projects in the Normandy Base Section. This he accomplished under the most adverse conditions due to shortages of equipment and personnel and the necessity of rehabilitating and reconstructing the entire communications system which was either nonexistent or damaged by shell fire."

V V

Indiana Associated Makes Organization Changes

Announcement was made November 21 that Captain C. Lind, state commercial superintendent of the Indiana Associated Telephone Corp., Lafayette, has been transferred to the commercial department of the Associated Telephone Co., Ltd., Santa Monica, Calif., and that E. L. Haynes has been named commercial supervisor to succeed him.

Mr. Haynes has been promoted from another position at the headquarters office in Lafayette. He will report to H. P. Carnes who has been made general commercial superintendent of all east central systems.

AT&T-FCC AGREE ON TOLL RATE CUT

THE American Telephone & Telegraph Co. announced November 30 that reductions in rates for interstate services amounting to over $20,000,000 annually have been agreed upon with the Federal Communications Commission to be effective February 1, 1946.

Reductions in interstate long distance telephone rates for distances between 340 and 2,140 miles will amount to approximately $16,000,000 annually. In addition, reductions amounting to $1,500,000 per year will be made in certain short haul interstate toll rates, which are for toll calls for distances under 40 miles. The short haul reductions will principally affect calls between the New York metropolitan area and New Jersey points, the FCC states.

Rates for teletypewriter exchange service for distances of more than 350 miles will also be reduced about $1,000,000 annually.

In addition, rates for private line telephone, teletypewriter and telephotograph are also being reduced at the longer hauls with savings to the users of these services of approximately $1,700,000 annually.

In commenting upon these reductions, President Walter S. Gifford of AT&T said that they had been occasioned by discontinuance of accruals to the company's employment stabilization fund. These have been made since the latter part of 1943 to take care of maintenance expenses which would have been incurred during the war years had it not been for lack of manpower and materials. Viewing Bell System earnings as a whole, he said there is nothing in the present or near future outlook that would justify any rate decreases whatever; in fact, the level of the system's earnings in recent years has been the lowest in its history, except for the worst years of the depression. However, the reductions were made on the showing of the interstate traffic by itself which is under the exclusive jurisdiction of the FCC. Earnings on the interstate portion of the business have been abnormally affected by the extraordinary volume of long distance calls and by the temporary overloading of the long distance plant.

Mr. Gifford also stated that looking to the future he was pleased with the commission's appreciation of the tremendous postwar program which lies ahead of the Bell System companies. This program may well mean securing over $2,000,000,000 in new money during the next decade and will require adequate earnings for the system as a whole if the program calling for more jobs, more materials and better service is to be accomplished.

The rate reduction now announced is another in a series of reductions which have been brought about periodically. The present reductions together with the prior ones since 1940, total well over $100,000,000 per year. The last previous reduction, effective July 1, 1945, amounted to $21,000,000 per year, according to the FCC.

The effect of the new rate reduction upon Independent telephone companies was not discussed in the announcements of the AT&T and the FCC, however, according to a recent letter of the United States Independent Telephone Association, it has been estimated that the loss to such companies will be between $350,000 and $400,000. It is understood that the USITA Toll Compensation and Settlement Committee will meet with Bell System representatives early in December, at which time it is expected that the effect of the rate reduction on the Independent industry will be discussed.

V V

Wisconsin Telephone Co. Promotes George B. Rogers

Frank M. Stephens, president of the Wisconsin Telephone Co., has announced the appointment of George B. Rogers, Wauwatosa, former general commercial representative, as general commercial manager, effective December 1. Mr. Rogers succeeded Frank M. McEniry, Milwaukee, who retired.

Mr. Rogers was employed by the Wisconsin company in 1912 as a collector at Milwaukee. He served successively in the assignments of cashier, commercial agent, supervisor of methods, sales supervisor and commercial supervisor. In 1932 he was promoted to district manager and in 1939 became Milwaukee commercial manager. He was appointed general commercial representative February 1, 1945.

Mr. McEniry's retirement culminated a career of more than 44 years of continuous telephone service. Starting in 1901 as lineman's helper for the Central Union Telephone Co., Rockford, Ill., he worked successively as lineman, installer, repairman and switchboard man, and was manager at Warren, Galena and Moline, Ill. In 1907, he came to the Wisconsin company in the capacity of district manager at Racine, later filling a similar assignment at Green Bay. He was promoted to the position of general commercial manager April 1, 1911.

V V

British Hail New Telephone Directories

It may be difficult for Americans to appreciate the joy demonstrated in Great Britain recently when new telephone directories were issued, the first in a long time.

New subscribers had been given copies — if and when they were accepted as subscribers—but the directories issued were, in most instances, out-of-date particularly in view of wartime changes. The new issue now delivered is re-edited and checked, includes all the latest changes and is clean and fresh, instead of dog-eared and tattered.

V V

Bell Purchases Lines Of Bayside, Me., Company

The New England Telephone & Telegraph Co. has purchased the Bayside, Me., telephone lines from Alton Seavey and assumed control October 15.

Extensive improvements are planned in service as soon as material is available.

V V

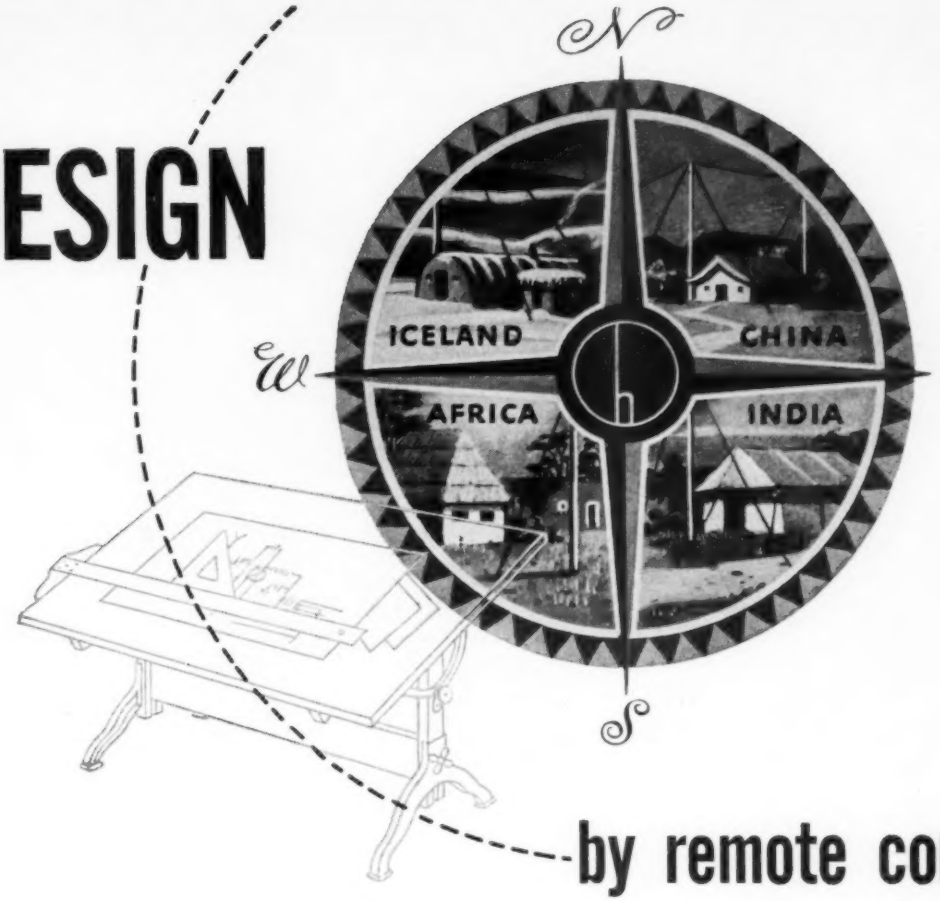
BOOK REVIEW

The fifth edition of Terrell Croft's *American Electricians' Handbook*, revised by Clifford C. Carr, head of the Electrical Engineering Department, Pratt Institute, Brooklyn, N. Y., now can be ordered through TELEPHONY for $5.00.

This 1,600-page book contains 1,177 illustrations, nearly 400 tables and gives 2,315 numbered items of information on electrical fundamentals, properties and splicing of conductors, circuits and circuit calculations, general electrical equipment and batteries, generators and motors, transformers, outside distribution, interior wiring, electric lighting and wiring tables.

The *American Electricians' Handbook* contains definitions and explanations of fundamentals for efficient electrical planning and practice. It describes materials, machines, appliances, fixtures and fittings of all types, and their advantages for various uses and services. Methods and data for planning electrical installations, tests, trouble-shooting and repair kinks also are included in the handbook which has been developed in 30 years of service.

DESIGN

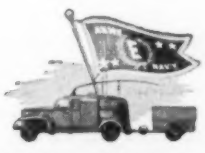


by remote control

The design of radio equipment that will come from Hallicrafters is already shaping up—determined largely by thousands of hams who, from their remote control locations all over the world, are sending advice and suggestions on new radio ideas to Hallicrafters engineering department.

Thousands and thousands of Hallicrafters pieces of high frequency radio equipment are in use in the armed services. In a high percentage of cases this equipment is used by operators with practical amateur experience. From these qualified experts Hallicrafters has received hundreds of letters telling how Hallicrafters-built equipment stands up under the most vicious battle conditions. Hallicrafters receives regularly many valuable suggestions from hams in the field and at home. From this rich deposit of "design by remote control" will emerge Hallicrafters new line—built to meet ham requirements, designed for the world's most exacting users—the radio amateurs.

hallicrafters RADIO



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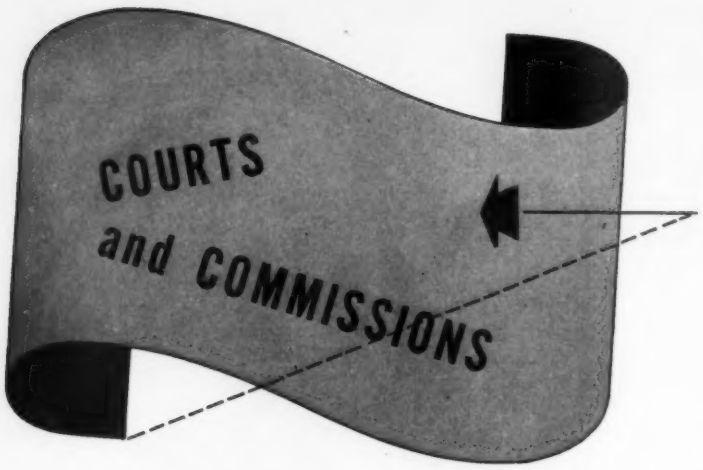

Rate Increases Approved for Inola, Okla, Company

The Oklahoma Corporation Commission, on November 28, granted the application of the Inola (Okla.) Telephone Co. for increased rates.

Increases granted were: Residence from $1.25 to $1.75; business from $2.25 to $3.00; rural switchboard, where subscribers own facilities, from $4.00 to $5.00 per year.

The company had asked $2.00 for residence rates and $7.00 per year for switching service. B. Richardson, telephone engineer, and Paul Reed, general auditor of the commission, agreed in their testimony that $1.75 was the usual rate in Oklahoma for residence service in exchanges the size of Inola and recommended this rate. The commission's action on rural switched rates was based on testimony of farmer-owners of such lines served from the Inola exchange that $7.00 was more than they could pay and still maintain their lines. They expressed no objection to the $5.00 per year rate.

The company presented a petition signed by all but one subscriber to city lines stating that the subscribers did not oppose the application for increased rates.

O. H. Mullen, present owner, testified that he purchased the Inola exchange in December, 1944, and that he proceeded to improve the property as rapidly as he could secure materials. From the date of purchase to the date of hearing, he spent approximately $2,635—making rural company owned lines metallic which were made noisy by construction of paralleling Public Service Company of Oklahoma and REA electric lines, replacing about 150 poles, purchasing repeating coils and a considerable amount of wire. He also ordered a $900 switchboard, which had not yet been delivered. He testified that he had practically doubled his investment in efforts to give good service.

Testimony showed that the Inola exchange had been operating at a loss and that neither Mr. Mullens, nor his wife have been receiving any salary for their services.

V V

Dismiss Request for C&P Service in Virginia Area

In an order entered November 29 the Virginia State Corporation Commission denied the petition of some 24 residents of the Varina area asking that the Chesapeake & Potomac Telephone Co. be required to provide service there instead of that now provided by the Twin-County Telephone Co.

At a recent hearing the Varina residents protested that the service of the present telephone system is outmoded and inadequate and asked that Chesapeake & Potomac be required to serve the area.

Both Chesapeake & Potomac and Twin-County companies objected to the petition, the former on the ground that it hasn't available facilities and the latter on the ground that it is equipped to render efficient service in the area.

V V

Nebraska Company Retains Increased Rates

The Nebraska State Railway Commission has granted authority to the Diller (Neb.) Telephone Co. to continue in effect the schedule of increased rates authorized as of December 7, 1943. Net rates are: *Business,* yearly, $20, monthly, $1.75; *residence and rural metallic,* yearly, $17, monthly, $1.50; *rural grounded,* yearly, $15.20, monthly, $1.35. The rates represent a monthly increase of 25 cents for the first two services and 15 cents on the third.

The commission found that the company has a total fixed investment of $42,755, or less depreciation, cash and materials and supplies, a net investment of $21,016. Subscribers' revenues represent a total of $6,753, toll $1,276, and miscellaneous, $278, a total of $8,307. Total telephone expenses and taxes for the year were $7,618, leaving a balance for return of $689. A recent valuation by the commission engineer shows a 65 per cent condition, and on this basis the depreciation reserve is adjusted to $14,485, leaving the net investment $31,017. The commission found that conditions warrant the continuance of the rate schedule.

V V

Lincoln T&T Revises Tariff at Surprise, Neb.

The application of the Lincoln (Neb.) Telephone & Telegraph Co. for authority to revise the local exchange tariff for its Surprise exchange has been granted by the Nebraska State Railway Commission.

Under existing tariffs, subscribers at Surprise were given added service to Shelby and Ulysses. These rural subscribers interested in service to Shelby have been transferred to the Shelby exchange, and this added service is eliminated. The company gives Surprise subscribers unlimited added service to the Gresham, Rising City and Ulysses exchanges.

As this action increases the scope of service to Surprise subscribers the commission approved the request without a hearing.

V V

Bell Manual Subscribers To Get Rebates

Telephone subscribers of manually operated exchanges whose service was interrupted by the recent strike of Illinois Bell Telephone Co. employes will receive adjusted bills representing a reduction of about $200,000. (TELEPHONY, December 1, page 31.)

Announcement of the credit was

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made by John D. Biggs, chairman of the Illinois Commerce Commission, after a conference with company officials. Included among the customers receiving rebates will be Chicago clients served by the Interocean and Lackawanna exchanges.

V V

Approves Merger of Illinois Independents

Approval of the merger of the Illinois Telephone Co., Jacksonville, the Automatic Home Telephone Co., Pontiac, the Illinois Valley Telephone Co., Streator, and the Wabash Telephone Co., Bloomington, was announced December 3 by the Illinois Commerce Commission.

The surviving corporation will be the Illinois Telephone Co.

V V

Warba, Minn., Company Discusses Rate Increase

Warba (Minn.) Telephone Co. officials recently met to consider raising the rates to pay for the installation a few years ago of double lines of wire in all lines leading into the central office.

Organized 20 years ago by shareholders Goodland, Felley, Sago townships and Warbo village, the Warba Telephone Co. has 300 subscribers at present.

V V

ICC Approves Rate Hike

The Illinois Commerce Commission November 27 authorized the Metamora (Ill.) Telephone Co. to increase its rates, thus permitting the company to make a profit of $1,264 a year compared with a present annual loss of $1,641.

V V

Summary of Commission Rulings and Hearings

Federal Communications Commission

November 28: Granted American Telephone & Telegraph Co., Dixon, Calif., three months' authority for point-to-point radio-telephone station in fixed public service using regularly licensed equipment, frequencies, power and emission to communicate with Philippine Long Distance Telephone Co., Manila.

California Railroad Commission

November 23: Granted Interstate Telegraph Co. authority to establish through or direct toll telephone message rates in Inyo and Mono counties for intrastate messages interchanged with Southern California Telephone Co.

Illinois Commerce Commission

November 27: Authorized purchase by Casey, Toledo & Neoga Telephone Co., Casey, of Greenup (Ill.) Telephone Co.

December 11: Hearing on petition of eight individuals for service by Illinois Bell Telephone Co. from Gibson City exchange. Continued from November 27.

Kansas State Corporation Commission

October 30: Issued applications of R. J. Enyeart for permission to cease operating Kingsdown (Kan.) Telephone Co. and of Frances L. Wideman for certificate and authority to operate there.

November 19: Issued application of Cedar (Kan.) Telephone Co. for permission to transfer franchise and cease operating there.

November 19: Issued complaint of Charles Smith against Cedar (Kan.) Telephone Co. concerning inadequate service.

Kentucky Public Service Commission

December 17: Hearing on application of Morgan Telephone Co., West Liberty, to extend lines to Ezel.

Minnesota Railroad & Warehouse Commission

December 12: Hearing on application of Rollag Telephone Co., Hawley, for rate increase.

Nebraska State Railway Commission

December 19: Hearing on application of Milburn & Anselmo Telephone Co., Merna, for rate increases at Anselmo, Brewster, Dunning and Merna.

December 28: Hearing on application of Firth (Neb.) Telephone Co. for authority to increase rates.

Oklahoma Corporation Commission

January 15 to 18, 1946: Hearing continued on application of Southwestern Associated Telephone Co., Lubbock, Tex., for adjustment of rates in 27 Oklahoma exchanges.

February 20, 1946: Hearing on application of Farmers' Mutual Telephone Co., Weatherford, for authority to make 10 cents service charge on long distance calls made by rural subscribers through the Southwestern Bell Telephone Co.

V V

Illinois Independent to Install Dial Switchboard

Postwar improvements being planned by the Schuyler Telephone Co., Rushville, Ill., as announced November 29 by Mrs. E. L. Abbott, secretary of the company, include a new Stromberg-Carlson automatic switchboard to be installed in the local office some time within the coming year.

The new board will have a capacity for 1,600 lines with 50 rural lines and 10 toll lines. The company also plans to install all new automatic telephones when the new board is received.

OLIVER TRANSPOSITION BRACKETS

From the complete line of Oliver Pole Line Material

Oliver makes a complete line of Transposition Brackets in sizes and types to suit the requirements of various systems. Several of the more popular styles are illustrated here. Designs are based upon standard practice of larger telephone, telegraph and railroad companies.

For complete information on these and other items, see the Oliver Catalog of Pole Line Materials.

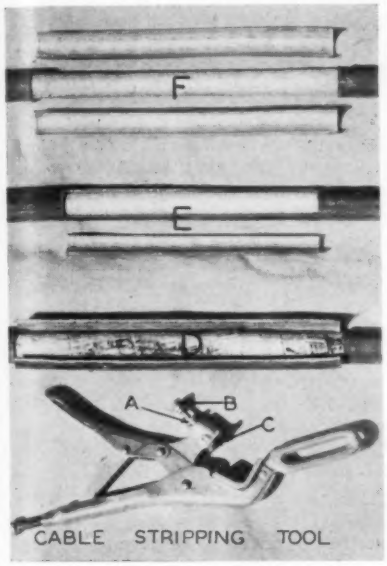
MAKERS OF POLE LINE MATERIALS SINCE 1894

OLIVER IRON AND STEEL CORPORATION
SOUTH TENTH AND MURIEL STREETS
PITTSBURGH 5, PENNSYLVANIA

BUY VICTORY BONDS

New Cable Stripping Tool Available

The information on this new tool was not available in time for inclusion in the article, "Cable Maintenance," by Daniel Seitz, published in the November 10 issue of TELEPHONY.



The accompanying photograph depicts a lead stripping tool and samples of its work. This tool will be found most useful for making sheath openings when clearing cable faults as shown by *Fig. 4*, on page 17 of November 10 issue of TELEPHONY.

Fig. A of the accompanying illustration is a blade depth adjustment and *Fig. B* is for setting the blade.

Fig. C is used for cutting either around the sheath (ringing it) or for cutting the sheath lengthwise.

Fig. D shows sheath opening made by cutting half-way around the sheath and then cutting lengthwise between these two cuts.

Fig. E shows a section of sheath removed. After repairs are made this same piece of sheath is replaced and soldered by use of the acetylene torch.

Fig. F shows how the entire sheath is removed by cutting around the cable and then making two horizontal cuts.

This tool should be in every splicer's kit. If used properly, it will save time and do a better job than can possibly be done with a chipping knife and hammer.

V V

Southern Bell's Mississippi Manager Retires

John C. Hay retired December 1 after 16 years as Mississippi manager of the Southern Bell Telephone Co.

He had been an official of the telephone company for nearly 50 years.

LINE WIRE and Strand

EXCEPTIONAL TENSILE STRENGTH

of Crapo HTL-135 and Crapo HTL-85 Telephone Line Wire provides these advantages:

- Longer spans
- Low construction costs
- Ability to withstand heavy ice and wind loads
- High safety factor
- Fewer service interruptions
- Low maintenance costs

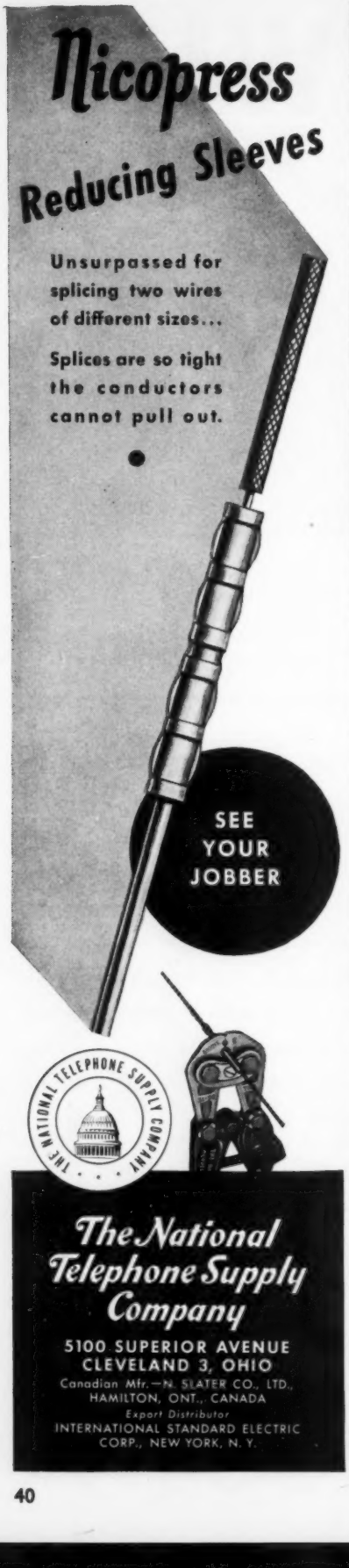
Samples of every production run of *Crapo* HTL-135 and *Crapo* HTL-85 Telephone Line Wire are tested on this equipment to insure that tensile strength meets specification.

Crapo HTL-135 and *Crapo* HTL-85 Telephone Line Wire and *Crapo* Galvanized Steel Guy Strand are available via Graybar. From Graybar you can also get top-quality lead-covered cable, hardware, and all the other items you need for line construction and maintenance. Give the Graybar Man near you a list of your needs. You can count on him to deliver the right materials, and his assistance will save you time. *Graybar Electric Company, Graybar Building, New York 17, N. Y.*

4538

Via GraybaR ... First Source of Telephone Supplies

IN OVER 80 PRINCIPAL CITIES


Nicopress
Reducing Sleeves
Unsurpassed for splicing two wires of different sizes...
Splices are so tight the conductors cannot pull out.
SEE YOUR JOBBER
THE NATIONAL TELEPHONE SUPPLY COMPANY
The National Telephone Supply Company
5100 SUPERIOR AVENUE
CLEVELAND 3, OHIO
Canadian Mfr.—N. SLATER CO., LTD., HAMILTON, ONT., CANADA
Export Distributor
INTERNATIONAL STANDARD ELECTRIC CORP., NEW YORK, N. Y.

USITA Executive Committee Meets in Chicago

The unfavorable effect upon small Independent telephone exchanges of the pending federal minimum wage bills which would increase the minimum wage from 40 cents to 65 cents the first year, to 70 cents the second year, and to 75 cents the third year, received the major attention of the executive committee of the United States Independent Telephone Association at its meeting in Chicago November 29.

The executive committee received a report from the subcommittee of the association's Employment Relations Committee, which met November 28 to discuss the minimum wage bills and further action to bring the plight of the Independent telephone industry to the attention of Congress. It also considered additional steps to implement the request of the association for an increase in the 500-station exchange exemption to 1,000-station exchanges. The subcommittee recommended that copies of the statements of the USITA executive vice president, C. S. Bailey, and J. C. Crowley, Jr., St. Paul, Minn., chairman of the wage and hour subcommittee, before congressional committees, be sent to all members of Congress and to Independent telephone companies. The executive committee approved this recommendation.

It also was voted to ask the regular and accredited members of the USITA to write to their representatives in Congress, explaining the adverse effect the proposed minimum wage bills would have on their operations by including statements of operating expenses and revenues and showing how earnings would be reduced under the proposed minimum wage rates. Companies also are to be urged to indicate how much service rates would have to be increased if the proposed wage rates were made effective.

Those attending the meeting of the wage and hour subcommittee were: Mr. Crowley, chairman; D. M. Davis, Aurora, Neb.; J. P. Walters, Toledo, Iowa; Samuel Tucker, Pleasanton, Kan.; J. H. Agee, Lincoln, Neb., chairman USITA Employment Relations Committee; USITA President W. C. Henry, Bellevue, Ohio, and Mr. Bailey.

In connection with the use of radio to supplement wire facilities in furnishing telephone service, the executive committee instructed the USITA Plant Committee to investigate the use of radio-telephone facilities, employing an engineer if necessary, and to make a report to the executive officers of the association as to its findings. The Plant Committee was instructed to collaborate with the association's Commercial Committee in making its investigation. Following the report, it is understood that the recommendations of the Plant Committee will be made available to Independent telephone companies.

The executive committee also instructed its executive officers to petition for permission to intervene in the investigation into the use of recording devices in connection with telephone service ordered by the Federal Communications Commission. Hearings will be held by the FCC on January 10. (TELEPHONY, November 10, page 23.)

The recommendations of the USITA Advertising Committee, in its annual report to the association's directors, that the present Independent industry insignia, or a new one, be used in advertising material designed for the Independent companies and also that the scope and importance of the Independent industry be emphasized in such advertising were discussed by the executive committee. These recommendations were referred to the executive committee for action by the directors. The executive group instructed the Advertising Committee to make concrete suggestions as to the use of an insignia and as to featuring the Independent industry in advertising material, so that definite action will be taken.

The committee also discussed the reports of the Secretary of Agriculture and Secretary of the Treasury on the so-called Hill rural telephone bill, which were made to congressional committees.

V V

Snowfall Snaps Wires In British Columbia

Working in deep snowdrifts, telephone and telegraph line crews recently battled to restore lines between Vancouver, British Columbia, and the rest of Canada, which were snapped by heavy snowfall.

In two days British Columbia Telephone Co. linemen had repaired 60 separate breaks in the Coquihalla Pass alone. Wires also were down in another communications bottleneck—the Fraser Canyon.

All telephone circuits in Kamloops remained out for several days and the farthest British Columbia point to which it was possible to telephone from Vancouver was Hope.

V V

To Set Date for Dial Service at Texas Exchange

The date for inauguration of dial service at the Two States Telephone Co.'s Palestine, Tex., exchange was expected to be announced following a recent meeting of company officials there.

Company headquarters are at Texarkana, Tex.

R. P. Singlehurst Resigns from Telephone Services Inc.

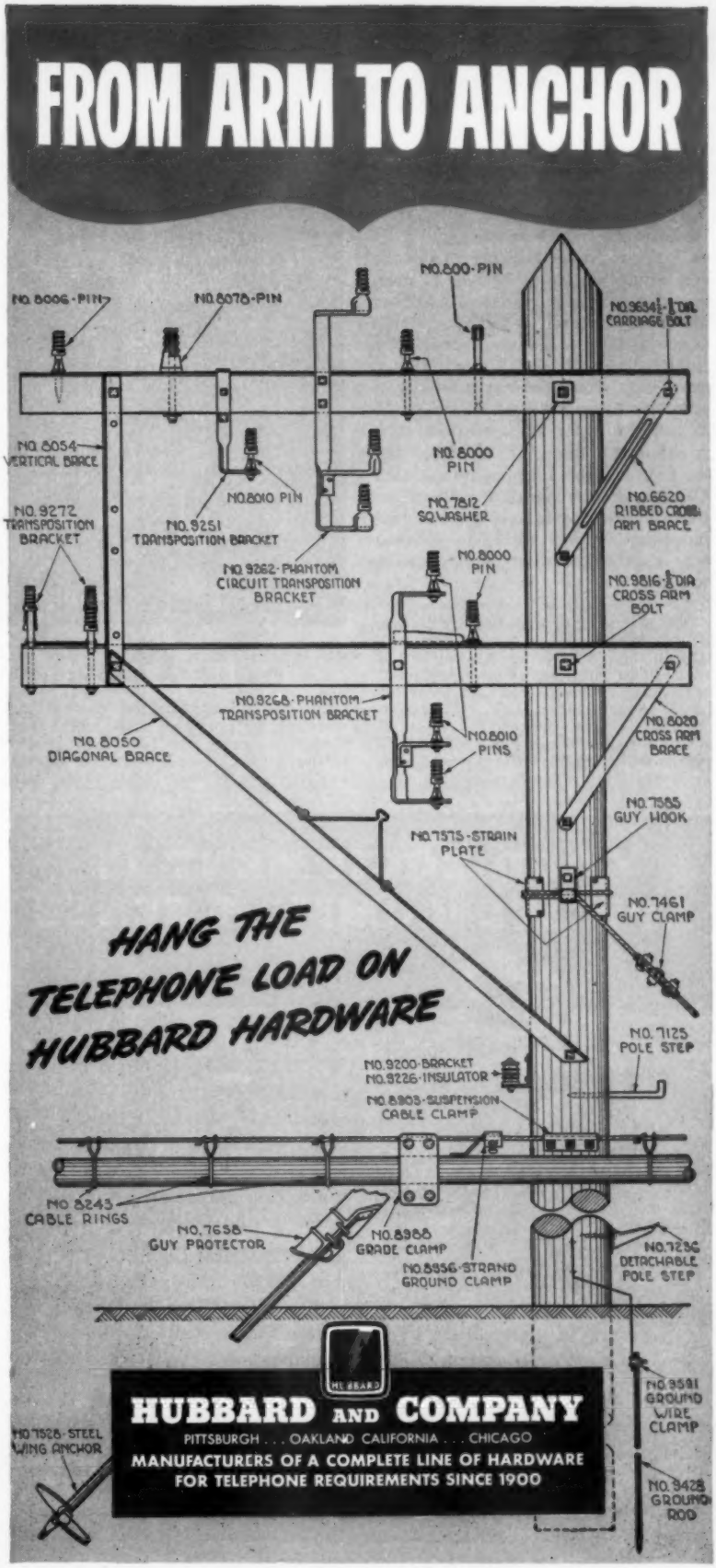
Robert P. Singlehurst, assistant vice president of Telephone Services Inc., Fort Wayne, Ind., operating service center for the domestic telephone companies of the Gary Group, resigned his position with that organization, effective December 1, to return to Honolulu, Hawaii, as a partner in the firm of Angus Lanford & Co. This is a new business formed to handle various lines of merchandise in the Hawaiian Islands, the Philippines and the Far East.

R. P. SINGLEHURST

Mr. Singlehurst, a native of Hawaii, formerly was associated with the Mutual Telephone Co., Honolulu, in various staff capacities. Coming to the United States in 1942, he was employed by the Union Telephone Co., Owosso, Mich., a Gary Group company, as assistant general manager. In March, 1945, he assumed a staff position with Telephone Services Inc., and shortly thereafter was promoted to assistant vice president.

Announcement also has been made by V. E. Chaney, president of Telephone Services Inc., that Raymond A. Hall has joined the staff of that company as assistant to O. R. Roach, engineer.

A graduate of the University of Montana, Mr. Hall was employed by Western Electric Co., from 1925 to 1938 in the engineering of central office equipment. In 1939, he joined the engineering department of Automatic Electric Co., remaining with that company until 1942, when he became associated with the First Service Command of the War Department in Boston, Mass., as telephone engineer. He resigned that position in October, 1945, to take up his new duties with Telephone Services Inc.



Maj. Gen. James A. Code, Jr., Receives DSM

Maj. Gen. James A. Code, Jr., was, by direction of President Truman, awarded the Distinguished Service Medal, second highest honor medal, for his outstanding services to the nation as assistant chief signal officer of the Army during the four years of war.

General Code is both a graduate of the United States Military Academy, West Point, and holds degrees of master of science and electrical engineer from Yale University.

General Code, besides acting as chief signal officer of the United States Army, served in Europe as General Eisenhower's chief signal officer of the European Theater of Operations during the first crossing of the Rhine and was awarded the Bronze Star Medal.

The service for which the President of the United States awarded the Distinguished Service Medal to General Code is as set forth in the following citation:

"Maj. Gen. James A. Code, Jr., performed exceptionally meritorious and distinguished service in a position of great responsibility from December, 1941, to February, 1945, and from March to September, 1945. As assistant chief signal officer he was responsible for developing plans and procedures which enabled the Signal Corps to convert from a small peacetime communications organization to its vast wartime proportions, and which provided for wholly new functions incident to the advent of radar. In accomplishing his part of the Signal Corps' task he recognized many latent problems before they arose, formulated initial solutions to those problems, and set up machinery to detect weaknesses and deficiencies in the manifold activities of the corps. Through his untiring efforts, General Code played a major role in expanding and reorganizing the Signal Corps in an extremely orderly manner which enabled it to meet every requirement for communications equipment and qualified personnel. His contribution to the war effort was of a quality in keeping with the highest traditions of the military service."

MAJ. GEN. JAMES A. CODE, JR., (left) receives congratulations from CHIEF SIGNAL OFFICER HARRY C. INGLES upon receiving the Distinguished Service Medal.

V V

Persia Buys Equipment From Great Britain

The Persian government has acquired the telephone and telegraph installations set up there during the war years by the British government. Costing 1,500,000 pounds at the time of installation, Gt. Britain's sale price was 300,000 pounds, which took into consideration the deterioration in service over that period of time.

The Persian government has paid 100,000 pounds down and will pay the rest within two years.

V V

C. Dee Early Is Owner of Littlefork, Minn., Company

C. Dee Early, former manager of the Citizens Telephone Co., Circleville, Ohio, is the new owner of the Littlefork (Minn.) Telephone Co. (TELEPHONY, November 3, page 50.)

Mr. Early left his duties with the Citizens company to join the armed forces and served as a lieutenant in the Signal Corps until recently.

GOOD EQUIPMENT IS APPLIED COMMON SENSE

BUCKINGHAM Linemen's Equipment is made by specialists. Finest materials and expert knowledge combine to make them first choice with the man on the pole.

BUCKINGHAM Equipment has proven its worth over a period of 40 years. It is now in general use by the United States Army Signal Corps and leading Utility Companies.

BUILT BY
BUCKINGHAM
OF BINGHAMTON

W. H. BUCKINGHAM MANUFACTURING CO., BINGHAMTON 6, N. Y., U. S. A.

John H. Agee Discusses Future Telephone Service

In a recent speech before the Lincoln Chapter of the American Interprofessional Institute, J. H. Agee, general manager and vice president of the Lincoln (Neb.) Telephone & Telegraph Co., said that while the War Production Board is now permitting the purchase of all telephone equipment without government approval, the company must observe established priorities. When the war ended the Lincoln company had 1,500 unfilled orders on hand. That number has been reduced to 200, and probably in a few weeks the company will be advertising its services. The speed of this accomplishment was due partly to the closing of war plants and air fields and the subsequent release of equipment, he stated.

Mr. Agee said that although during the war the public accepted without complaint the type of service it was possible to give, this abruptly changed after VJ-day. The people seemed to think that with the surrender of Japan everything would return immediately to a prewar status. This changed attitude has been reflected chiefly in the field of toll service.

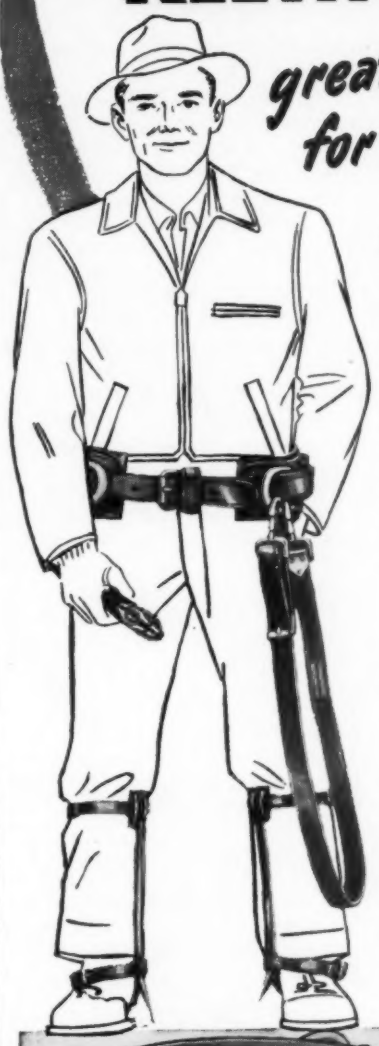
Mr. Agee said that in his opinion there will be little change in the immediate future either in the telephone instrument or the type of local telephone service. Future changes will affect long distance and rural service. He believes that when the motor radio comes into general use telephone company service still will be necessary to provide connections through receiving and sending stations established for that purpose.

As to rural service, which in the past has represented a subsidized service, the burden of cost being borne by long distance and urban revenues, recent studies and inventions, which Mr. Agee described, indicate that newer and less costly types of construction may change the picture so that the desire of companies to provide a nearly universal service may be fulfilled.

Plans of the Lincoln company, now in the blue print stage, provide for replacement of present types of rural instruments with dial or automatic service. Another possibility is the installation of very small dial switching units through which nearby groups of farmers may have direct communication and which will reduce materially line mileage construction.

Mr. Agee outlined the possibilities of faster long distance communication through the use of direct dialing, but said, in conclusion, that regardless of further mechanical inventions which might widen the telephone horizon, he still believes the most valuable part of

KLEIN-KORD..
greater safety for LINEMEN!



Klein-Kord Safety Straps, developed more than ten years ago, are today used exclusively by many of the country's largest public utilities.

Multiple plies of long staple cotton of a special weave are vulcanized in rubber. This weave permits the use of a tongue-type buckle without risk of slipping or ripping, even under severe tension and excessive loads. The red center provides a warning signal. The strap is safe for use until worn down to the center ply—"Stop when you see red."

Klein-Kord is extremely tough, flexible, and of uniform thickness and strength. It has a low conductivity, will not stretch, and is unaffected by moisture.

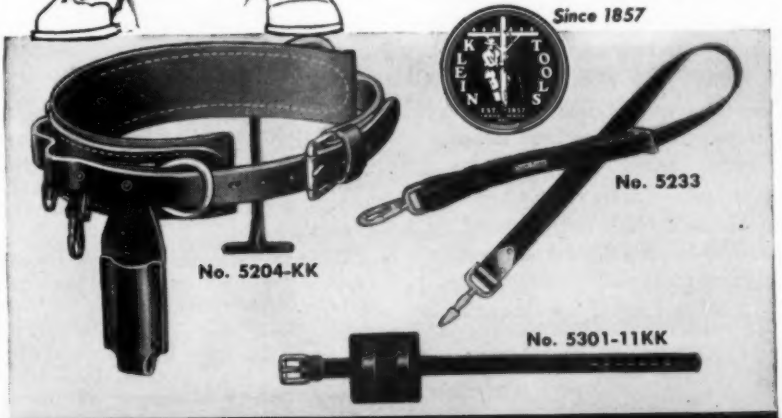
An improved Tool Belt of Klein-Kord is also available. This belt has found favor with linemen, and offers the quality features that have made Klein Belts the choice of linemen for generations.

Klein-Kord is an exclusive Klein development available only on equipment carrying the Klein trade-mark.

Write for book giving full information on Klein-Kord Safety Straps and Belts.

Foreign Distributor:
International Standard Electric Corp., New York

Since 1857



Mathias KLEIN & Sons
Established 1857
Chicago, Ill., U.S.A.
3200 BELMONT AVENUE, CHICAGO 18, ILLINOIS

HEMINGRAY INSULATORS

Favorably Known Since 1870

HEMINGRAY No. 42
Standard for many years. Its long leakage path keeps toll lines trouble-free.

ALL FIRSTS—NO SECONDS!

Hemingray Insulators are checked and rechecked—all along the production line.

Checked carefully by visual inspection — checked thoroughly under exacting laboratory control!

That's why Hemingrays are so uniform, so dependable. That's why Hemingrays cost so little in actual service life.

Hemingrays are sold by principal jobbers and are manufactured by Owens-Illinois, Hemingray Division, Muncie, Indiana.

OWENS-ILLINOIS
HEMINGRAY INSULATORS
Telephone-Telegraph
Export Agents: International Standard Electric Corporation, New York City

telephone service remains as before in the giving of efficient, courteous and economical service at home.

V V

Army May Take Over Lines In British Columbia

Recent discussions in the House of Commons concerned keeping in operation the overland communications in British Columbia established during the war.

Air Minister Colin Gibson stated that a move was contemplated under which the Army would take over operation of the telephone lines in the interior of British Columbia.

It was believed likely the Army would make the use of communications available to settlers in remote areas.

In reply to a protest from Gen. G. R. Pearkes, House member from Nanaimo, B. I., against discontinuance of the wireless communication link between the Queen Charlotte Islands and Prince Rupert, Mr. Gibson promised a further investigation.

Main telephone lines involved in the above action were: Vancouver to Hope and Ashcroft, up the Cariboo to Williams Lake and Prince George, then west through Vanderhoof to Prince Rupert, with a branch from Williams Lake to Bella Coola; on Vancouver Island from Victoria to Campbell River, Kelsey Bay and on to Cape Scott, with branch line from Qualicum to Alberni and Tofino.

Arrangements with the British Columbia Telephone Co. in regard to purchasing installations made by the government for war purposes at a cost of $12,500,000, likewise are to be investigated.

V V

Dial Service Installed In Two Arkansas Towns

Two Arkansas towns, Waterloo in Cleburne County and Quitman in Nevada County, are installing modern, dial operated telephone systems built by Kellogg Switchboard & Supply Co., Chicago.

The new exchange in Quitman will provide for 100 lines. The Waterloo installation is a 50-line board.

V V

Day Becomes Manager of Missouri Independent

Walter Day, former manager of the Clarence, Mo., office of the Western Light & Telephone Co. recently succeeded Charles Willis, who has been manager of the Canton and LaGrange office of the Western company for the past three years. Mr. Willis has resigned his position to go into partnership with his father.

Mr. Day entered the employ of the Western company about three years ago in Canton. After six months he was made manager of the Lewistown, Mo., office, where he remained for 16 months. He then was transferred to Clarence, where he has been local manager the past year.

V V

Indiana Associated Company Starts First Aid Classes

Certificates in the Red Cross standard first aid course have been issued to nine employes of the Indiana Associated Telephone Corp., Lafayette, receiving instruction under Roger M. Steward. The telephone corporation has started a training program whereby all employes will have an opportunity to take the standard course in first aid. The first class completed by Mr. Steward includes: Richard Cole, George Crosier, Don L. Dine, Harold Foster, Claude Gossman, John Harris, Richard Knott, Cleo Lester and Ralph Smith.

Mr. Steward received his standard and advanced first aid training at Purdue University, and his instructor's training at Noblesville, Ind.

V V

OBITUARY

EHRICK B. KILNER, 55, an executive of the Associated Telephone & Telegraph Co., died November 5 at his home in Greenwich, Conn.

Mr. Kilner, a graduate of St. Paul's School in Concord, N. H., and Princeton University, was a partner from 1921 to 1942 in Carreau & Co., stock brokers, New York City. In 1943 he took several offices with affiliates of the telephone company. He was vice president of its Gary Services & Investment Co. and director of Associated Telephone Services, Ltd.; Automatic Electric Co. and British Columbia Telephone Co.

Surviving are his widow, mother, four daughters, a brother and a sister.

V V

Service Managers Transfer

E. D. Grimmer, Fayetteville, N. C., has been transferred to Oxford, N. C., as service manager of the Carolina Telephone & Telegraph Co., succeeding W. E. Thornton who has been moved to Williamstown, N. C., as manager of the company's branches at Williamston, Windsor, Columbia and Clement. Mr. Thornton had served as service manager at Oxford for the past six years.

Japs Wrecked Manila Cables, Manager Says

Theodore L. Hall, general manager of the Philippine Long Distance Telephone Co., Manila, arrived in Fort Wayne, Ind., November 21, after a 7,000-mile trip to view operations and records system of the Home Telephone & Telegraph Co.

The facilities of the Philippine company were almost completely destroyed by the Japs when the U.S. Army began closing in on Manila. They dynamited three offices and all bridges in the city, destroying the underground cables, Mr. Hall said.

The company president escaped from Bataan with General MacArthur and later was killed in an airplane crash. Mr. Hall was taken prisoner and lost 79 pounds in the Santo Tomas internment camp.

The only telephone communications now in existence in Manila are those of the U.S. Army, Mr. Hall said.

V V

Mankato, Minn., Company Buys Rural Property

Sale and transfer of certain physical telephone properties of the Riverside Rural Telephone Co., at LeRay Township, Blue Earth County, to the Mankato (Minn.) Citizens Telephone Co. was approved November 28 by the Minnesota Railroad & Warehouse Commission.

The commission ordered that, on consummation of sale, the rural rates of the Mankato company's Eagle Lake exchange were to become effective in the territory formerly served by the Riverside company.

No consideration was given by the commission to value or price paid.

V V

RCA Orders 25,000 Kellogg Koiled Kords

Improved inter-car speaker units for drive-in theatres, soon to be offered by Radio Corp. of America, will be equipped with the new retractive extension cords developed by the Koiled-Kord Division of Kellogg Switchboard & Supply Co., Chicago, it is announced.

An initial order for 25,000 Kellogg developed Koiled-Kords for use with the new type speakers has been placed with Kellogg by the RCA Victor Division at Camden, N. J.

Originally developed for use in intercommunication systems on submarines and bombers, the new Kellogg product is finding many important peacetime uses. Its adaptation for inter-car speaker connections in outdoor theatres will contribute to improved reception and provide greater comfort and convenience for car occupants.

STROMBERG-CARLSON *Recommends...*

WIRE

FOR YOUR

CABLE SPINNING JOBS

is made with special extra heavy galvanized coating and will serve long under all conditions.

.091 size approx. 325' per coil
.061 size approx. 650' per coil

COPPERWELD SPINNING WIRE for use with Copperweld strand.

.091 size approx. 350' per coil

Coiled on any type hub required.

MFD. BY CABLE SPINNING EQUIPMENT CO.
Topeka, Kansas

ELECTROX RECTIFIER

Type PA-05004 with Power-off Relay

Manufactured by
Schauer Machine Co.

Operator's circuit is automatically transferred to stand-by dry cells in case of power failure. Operates direct from 110 volt, 60 cycle lighting circuit . . . delivers smooth, constant, direct current to operator's circuit on magneto switchboard. No hum; no interference.

- **Low First Cost**
- **Low Operating Cost**
- **Dependable Service**
- **Long Life**

Write for Descriptive Circular 443

STROMBERG-CARLSON COMPANY
PROGRESS IN TELEPHONY

Factory and General Offices: Rochester 3, New York, U.S.A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

ALL the strength and durability inherent in steel are combined—with definite economies—in *Crapo* Galvanized Steel Strand. Heavy, ductile, tightly-bonded zinc coatings, applied by the famous *Crapo* Galvanizing Process, provide lasting protection against corrosion.

Ask the distributor of *Crapo* Galvanized Products near you or write direct for further information!

INDIANA STEEL & WIRE CO.
MUNCIE, INDIANA

Slack Quickly and Safely Taken up!

No. 324 Simplex Wire Tensioning Jack. 2-tons capacity. 20¼" take-up with every grip. Weighs only 13 lbs.

One man readily and safely pulls overhead and underground cables, or takes up the slack in guy, trolley and transport wires. Quickly hitched, using standard wire grips and slings. Exerts a powerful straight line pull. Lever has safety clip—cannot fall out.

Simplex
LEVER SCREW - HYDRAULIC
Jacks
Templeton, Kenly & Co.
Chicago (44), Illinois
Better, Safer Jacks Since 1899

Stromberg Names Gill Surplus Sales Manager

Lloyd L. Spencer, vice president and general sales manager of the Stromberg-Carlson Co., Rochester, N. Y., has announced the appointment of G. S. Gill as sales manager of the company's government surplus materials department.

G. S. GILL

Mr. Gill recently resigned the post of deputy chief of the program planning section of the communication section of the War Production Board. His Washington wartime post supplemented a second full-time job, that of running the Cass County Telephone & Telegraph Co.,Virginia, Ill., as president and general manager.

A native of Girard, Ill., he attended Virginia, Ill., grade school, before entering Peddie Preparatory, Hightstown, N. J. He is a graduate of the University of Illinois, class of 1928, and completed graduate work in the Harvard School of Business Administration.

Mr. Gill is a grandson of E. J. Huff, one of telephony's early pioneers. The third generation of Independent telephone men in his family, he spent all of his childhood and most of his business life in and around the telephone world. Mr. Gill served for one year as associate editor of Telephone Engineer.

V V

Copperweld Issues 30th Anniversary Booklet

In commemoration of its 30th anniversary, the Copperweld Steel Co. of Glassport, Pa., just has prepared a colorful brochure outlining its history, together with many other interesting features. Outstanding installation photographs showing some of the places where Copperweld products are being used are included in one of the sections.

S. E. Bramer, president of the Copperweld Steel Co., makes the following comment at the beginning of this book:

"We are proud of our past 30 years of accomplishment—but what we have done is not nearly so important as what we will do. We will strive always for higher quality and better service—for the good will of all our customers, employes and stockholders."

Distribution of this brochure is being made to the company's customers, employes and stockholders.

V V

H. S. Williams Returns To Automatic Electric

H. S. Williams, who prior to entering active service with the United States Navy was vice president of Automatic Electric Sales Corp. in charge of government negotiations, now has been released from the service and has resumed his former position, with headquarters in Chicago. Mr. Williams was a member of the Naval Reserve prior to the Pearl Harbor attack, immediately after which time he was called to active duty. At the time of his release from the service he had attained the rank of commander.

Mr. Williams entered the employ

New IMPROVED CHANCE TIPS TUGGER

Pulls or Lifts in any Position...

Chance Tips Tuggers — used for tightening guy wires, hoisting transformers, or any number of pulling, lifting and lowering jobs — have been redesigned and incorporate many improvements over previous models.

- Extreme light weight — easy handling on poles.
- "Herc-Alloy" link chain — no kinking or binding.
- Oil impregnated bushings — no more lubrication.
- Lift wheel and ratchet of heat-treated carbon steel.
- "Finger-reach" up-and-down trigger—one hand operation.
- Tension control — more accurate load spotting.
- "Free Wheeling" —quick adjustment.

Write us, or ask your jobber for more information on Chance Tips Tuggers.

ABC INDUSTRIES

A·B·CHANCE CO. · CENTRALIA MISSOURI

of the Automatic Electric organization in 1924. After completing the customary training course, he spent some months in the inspection engineering department of the Automatic Electric factory, and in 1925 joined the sales organization.

H. S. WILLIAMS

For several years he was engaged in various industrial sales activities, later becoming assistant sales manager in charge of specialty sales. In 1933, he went to New York to become eastern manager for the sales company, and in 1935 was elected vice president in charge of government sales. During 1940 and 1941, he was occupied fully with staff work on the fast growing volume of government contracts.

Called to active duty with the Navy in December, 1941, Mr. Williams first was assigned to the New York Navy Yard, where, as lieutenant-commander, he assumed duties as assistant planning and estimating superintendent for the Industrial Department.

In September, 1942, he went to Washington where he was engaged on special assignments for the Chief of Naval Operations, and beginning in January, 1943, was engaged in important missions which took him to China and other points in the Far East. Returning to the United States in November, 1944, he was appointed planning and estimating superintendent of the New York Navy Yard, which position he continued to hold until his release from the service and the resumption of his duties with the Automatic Electric Sales organization.

Do Your Revenues Suffer because subscribers have too many inside calls?

This man has the answer . . . a telephone and a Teletalk at his elbow!

When your subscribers' telephone lines are cluttered up with nonrevenue-producing inside calls, time is lost, efficiency is lowered and—this is most important to you—revenue calls are either delayed or lost altogether!

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Every executive in every business, industrial, financial or other organization should have a Teletalk, as well as a telephone, on his desk. This setup gives the added advantage of enabling the user to get needed data over the Teletalk while talking on the outside telephone.

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New Wired Plugmold Aids Outlet Installation

Completing development work interrupted by the war, the Wiremold Co. of Hartford, Conn., now announces availability of ready-to-install prewired plugmold in 3 ft. and 6 ft. lengths, with outlets wired in position on either 6 or 18 in. center.

Outstanding features of the new wired plugmold are its small size of $\frac{7}{8}$ in. high by $1\frac{3}{8}$ in. wide, convenience outlets may be added or relocated to suit the particular needs of the user, and all of the fittings in the No. 1900 plugmold line are usable with it.

Wired plugmold will be furnished complete, ready to install, in unit and standard (10-unit) packages, each length furnished with connector blocks at each end and with jumpers for immediate, easy connection. Each length also is furnished with a cover coupling and sufficient No. 6½ flat head wood screws to complete the installation. No tools other than a screwdriver are required.

Wired plugmold has been designed especially to meet the requirements of multiple convenience outlet installations in homes, stores, schools, hospitals, offices, etc., and may be used in combination with the standard No. 1900 plugmold system, or interconnecting with other Wiremold surface metal raceway wiring systems, to complete the comprehensive modern wiring installations.

V V

Homelite Corp. Opens Seattle Office

The Homelite Corp., Port Chester, N. Y., recently opened a new branch office in the Terminal Sales Building, Seattle, Wash. A. D. Sherwood, who recently was honorably discharged from active duty after serving more than two years as a lieutenant in the Naval Air Corps, will be in charge. Before the war, Mr. Sherwood was a salesman for Homelite in the Charlotte, N. C., area.

To provide quick service for Washington, Oregon and Idaho, the Seattle office will carry a complete stock of Homelite parts and is equipped fully for repair and overhaul work.

R. J. Marschalk, newly appointed manager of Homelite's San Francisco office, has announced complete restoration of the company's service and parts facilities for northern California and Nevada. The Los Angeles branch office, under C. E. Southwick, will continue to serve lower California and Arizona.

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Northern White and Western Red
Cedar Poles—Plain or Butt-Treated

POLES

B. J. Carney & Co., 100 N. 7th St., Minneapolis, Minn.—Western red cedar poles. Pentrex Butt Treated or Plain.

C. M. Christiansen Co., Phelps, Wis.—Northern White Cedar Poles, plain or butt treated.

International Creosoting and Construction Co., Galveston, Texas.—Creosoted Southern Yellow Pine Poles. Plants: Beaumont and Texarkana, Texas.

T. M. Partridge Lumber Co., Minneapolis, Minn.—Northern White—Western Red Cedar Poles. Plain or butt-treated.

Pensacola Creosoting Company, Pensacola, Fla.—Creosoted Southern Pine. Poles of Superior Long Leaf Quality.

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Applicants must be under 45 years of age. Give full details of qualifications in first letter. Personal interviews will be arranged and considered confidential. Write Box No. 2183, c/o TELEPHONY.

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WANTED: Local manager for telephone company operating in Pennsylvania having in excess of 4,000 stations. Good opportunity for man qualified to advance to larger system groups. In application furnish age, education, experience, present employment, draft status, small photograph, recommendations, etc. Write Box 2188, c/o TELEPHONY.

CABLEMEN WANTED: Three experienced cablemen wanted by class A company in central Florida. Must have at least three or four years' experience and be able to handle all phases of cable work. Will pay $46 per week on 44 hour basis. All expenses paid while away from headquarters. Group life and sickness disability insurance for employe and hospitalization insurance for employe and dependents provided without cost. If interested, furnish age, experience, references, etc. Write Florida Telephone Corporation, Leesburg, Fla.

WANTED: Telephone Accountant—qualified to supervise all phases of telephone accounting for Class A companies. Give full information as to age, experience, draft status, etc. Attach small photograph. Write Telephone Services, Inc., 16th Floor, Lincoln Tower, Fort Wayne, Indiana.

HELP WANTED

WANTED: Experienced telephone journeymen, a lineman, and a combination man. Write Community Telephone Co. of Wisconsin, Black River Falls.

WANTED: Assistant to General Manager for large telephone property. Must have executive ability and administrative experience. In application furnish information as to age, education, experience, present employment, draft status, small photographs, recommendations, etc. Write Box No. 2166, c/o TELEPHONY.

WANTED: Plant Superintendent for large telephone property. Good salary for man having qualifications. In replying, furnish complete information as to age, education, experience, present employment, draft status, small photograph, recommendations, etc. Write Telephone Services, Inc., 16th Floor, Lincoln Tower, Fort Wayne 2, Ind.

WANTED: Young man for sales and advisory work to travel for manufacturer. Practical experience in outside construction and maintenance preferred. Permanent position and good opportunity for man with proper qualifications. Write Box No. 2212 c/o TELEPHONY.

HELP WANTED

WANTED: Man and wife, with or without family, to maintain the lines and operate the switchboard for a rural telephone system located in northeastern Indiana. House provided. Write T. J. Mawhorter, Peoples Mutual Telephone Co., Wawaka, Ind.

POSITION WANTED

POSITION WANTED: Telephone man with 13 years' sales experience and engineering training desires permanent connection. Write Box 2221, c/o TELEPHONY.

POSITION WANTED: Construction foreman or local manager, 23 years' telephone experience. A-1 reference. Married, 42 years old. Prefer Middle West. Write Box No. 2222, c/o TELEPHONY.

POSITION WANTED: Man with 16 years' telephone experience, on both inside and outside plant, desires position with Independent company in Middle West. Write Box No. 2223, c/o TELEPHONY

FOR SALE

FOR SALE: Leich four-position C. B. switchboard, capacity 1,200 lines. Present equipped 700 C. B. lines, 60 lamp ended magneto rural lines, 20 lamp ended toll lines, 17 universal automatic ringing five frequency cord circuits per position, complete relay rack and line relays. Complete power and ringing equipment less batteries. Cook No. 38 M.D.F., 780 No. 3800 Cook protectors, 1100 cable pairs. Equipment has been in service three years. Price complete $6,500. Write Nodaway Telephone Co., Maryville, Mo.

FOR SALE: Exchange with $3,600 gross receipts now, plenty of cable, plant in good shape, house and lots. Near Austin, Tex. Write E. F. Stephen, De Leon, Tex.

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No. 116 No. 118 No. 119

BUCKEYE TELEPHONE and SUPPLY COMPANY
COLUMBUS 6, OHIO

V V

Lacy to Succeed Welch As Michigan Bell Head

Directors of the Michigan Bell Telephone Co, Detroit, November 29 accepted the resignation of George M. Welch as president, effective January 31, and elevated Thomas N. Lacy to the presidency.

Ben R. Marsh, general commercial manager, will succeed Mr. Lacy as vice president and general manager.
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